

Campus Management System (CMS)

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2- Introduction of Campus Management System

Current CMS system automates all of the key campus management processes and automates all major university processes under one umbrella. It provides pure web based solution (any time anywhere 24/7) access for administrative, transactional and academic processes needed to enable a collaborative campus.

This CMS System has been developed in 12c Database and Oracle Apex as a front end tool and has been tested in different universities for the last ten (10) years. We have gone through multiple experiments and for any new clients this software provides all those experiences and results that are already adopted by different universities and the new client is in better position to take certain decisions when implementing it.

The software works in any academic system including Semester, Term and Annual base system. It implements the state of the art security features like Virtual Database implementation for multiple campus and Data Hiding techniques for multiple programs.

Management of multiple campuses, diverse student populations with less staff, less money, and yesterday's technology. Campus Management enables Universities to manage growth, improve services, and stay competitive easily and affordably. This will centralize and automates manually intensive processes, enabling information to flow freely and securely among campuses and departments.

Students can apply and register for multiple programs in one online session without going through separate admissions, registrations, and financial aid applications. Evaluation and planning can be simplified across many institutes, departments, and programs. Services to faculty, alumni, and other key constituents can be enhanced while administrators and business officers have greater transparency for enacting policies. As a result, institutions can meet and surpass rising expectations for services, academic performance, and administrative excellence.

A single integrated application that automates all processes on the campus for better efficiency. CMS is a modular, cloud-based system that simplifies complex back-end administrative work so you can skip all the tedious tasks.

Administration can reap several benefits from the Campus Management System some of which are

- ✓ Entire campus management
- ✓ Effective communication between teachers, parents and students
- ✓ Centrally stored information with zero redundancy
- ✓ Best possible resource optimization
- ✓ Availability of microscopic as well as macroscopic views
- ✓ Delivering accurate, accessible information to students
- ✓ Ensuring maximum system availability and reliability.
- ✓ Integrated, streamlined business processes using advanced functionality with the elimination of creation of shadow redundant systems

4-Technical Specification of CMS

4.1 Previous versions of the Campus Management System

- ✓ Oracle 7 Database & Developer 5
- ✓ Oracle 8 Database & Developer 6i
- ✓ Oracle 10g Database & Developer 10g
- ✓ Oracle 11g & Developer 10g
- ✓ Oracle 11g & Oracle Apex 5

4.2 Current versions & Supporting technologies

- ✓ Oracle 11g & 12c Database
- ✓ Oracle Apex 19.1
- ✓ Oracle 10g Reports Builder
- ✓ JavaScript & JQuery
- ✓ HTML 5
- ✓ CSS 3

4.3 Operating Platform Support

- ✓ Windows 7,8,2008,2012
- ✓ Linux

4.4 Third tier applications support for accessing

- ✓ All browsers like internet explorer, Firefox, Google Chrome, Safari
- ✓ Android Mobiles
- ✓ Apple Mac

4.5 Support & maintenance

- ✓ The firm has dedicated Offices in Karachi, Lahore and Peshawar for support and maintenance.
- ✓ Principal TechNet / remote Support.
- ✓ The Firm has completed Similar Projects in Pakistan (based on deployment of CMS).
- ✓ The Firm completed Similar Projects having the capability of supporting sub-campuses.
- ✓ The firm offers incorporation of additional modules, additional features and customization of existing module to make them tailored to university requirements.

4.6 Security / System Administration

- ✓ The solution provides varying granularity for data level security. Respondents to explain fully the level of granularity and an overview of how the security system is structured - e.g. roles/groups/menu functions etc. Security based around roles that collect users into logical groups. Roles are assigned permission lists, granting access to system objects such as menus, pages, background jobs, reports and row-level security provisions.
- ✓ The solution ensures that at logon, users are required to enter a unique user ID and a password and login code.
- ✓ The solution allows user system administrators users to maintain security at page, report, job level or data field for roles and/or users without the need for IT/DBA support
- ✓ The solution provides the facility to link security roles to individual users
- ✓ The solution allows for the creation of an unlimited number of security roles
- ✓ The solution allows user system administrators to link multiple security roles to an individual user
- ✓ The solution allows roles and/or users to be configured to have restricted update access for specific forms. e.g. User can only update course information for those courses for which the user is responsible.
- ✓ The solution has the ability to limit data operations (insert, update, delete or query only) assigned to particular roles
- ✓ The solution allows user system administrators the ability to reset user passwords
- ✓ The solution will provide appropriate security to restrict student access to their own details
- ✓ The solution provides the facility to set up menus and sub-menus for classes of users
- ✓ The solution allows user system administrators to immediately suspend individual user access privileges
- ✓ The solution has an automatic timeout of connected but inactive Users
- ✓ Ability to restrict access of users to particular types of courses e.g. user A has access only to graduate type courses (e.g. Masters) and user B has access to undergraduate type courses.
- ✓ Ability to restrict access of users to specific campus
- ✓ Department based security e.g. users from one faculty/school is able to access only records relating to the particular faculty.

4.7 Ease of Use

- ✓ The CMS allows end users to access the application using any standard web browser without requiring without additional software or plug in installation requirements
- ✓ The application provide an intuitive user interface that with simplified role based navigation, work lists, favorites, hyperlinks, effective use of graphics, copy and paste, and other standard web techniques and constructs.
- ✓ Web based online context sensitive help facilities.
- ✓ The solution carries forward context values (at least student ID, course code, citizenship, gender, title) from one form to the next. Within a given page, basic context values are carried through on the top of all of the tabs (Student Name and ID and other relevant context values). In addition, Student ID and other data items appear in context for search when moving between screens
- ✓ The solution allows users to create list of favorites of forms and Reports
- ✓ The solution allows users to setup the default values for each term/semester to facilitate quicker data entry.

4.8 Data Integrity

- ✓ The solution provides comprehensive data validation at point of entry to the maximum extent possible
- ✓ Data is cross-validated at point of entry against other data held within the solution to the maximum extent possible, ensuring data integrity at all times
- ✓ Data is cross-validated at the database level against other data held within the solution to the maximum extent possible, ensuring data integrity at all times
- ✓ The solution architecture provides extensive and comprehensive implementation of business rules and constraints within the application logic tier
- ✓ The solution provides extensive validation reports for all batch data creation & update processes. Batch reports log their progress to a batch messages area. They may be viewed readily via the browser.
- ✓ The solution adopts an open format interface that doesn't require proprietary tools
- ✓ The solution will be able to input data item/objects from other sources efficiently and easily
- ✓ The solution supports date effective data to the maximum degree possible, thereby enabling the maintenance of comprehensive data history

4.9 Audit Trail

- ✓ The solution includes comprehensive audit trail functionality.
- ✓ The solution provides a history of all on-line transactions especially in the self-service environment

4.10 Batch Process

- ✓ All reports/jobs to be able to be run on-line and in batch. Users should be able to schedule batch processes to run at a specific date/time and frequency of recurrent job.
- ✓ Ability to run any number of jobs/reports in a single batch request; jobs can be set to run in sequence or in any order.
- ✓ Ability to send reports via email as an attachment - in user selectable formats e.g. pdf, csv etc
- ✓ The solution provides comprehensive and clear run logs including error reports

4.11 Mobile Apps

- ✓ The system also provides mobile applications that provides a smartphone interface (Android and iOS support) to essential Self Service transactions such as viewing exam results, course schedule, etc, and push notifications to alert students.
- ✓ The system allows the institution to modify and brand the mobile applications to fit the institution requirements

8-Online Admission

Online Admission Module identifies, track and monitor the admission workflow, from student application until the acceptance/ confirmation process. Online Admission provides the following process.

8.1 Online Admission Setup

This process is used to setup programs going to offer for admissions. Setup include

- ✓ Setting names of Programs offered for online admissions
- ✓ Remove Program from online admission upon seat availability Limits
- ✓ Setting Programs eligibility criteria
- ✓ Setting Offered Semesters like Spring-2019 or Fall-2019
- ✓ Admission Guidelines document upload (link from website)
- ✓ Admission offices contacts
- ✓ Setting Test Date, Time and Venue
- ✓ Capacity settings to provide auto timing slot to students for entry test

8.2 Online Admission

- ✓ The system supports both web online and manual applications for the university academic programs/courses. For manual applications, authorized staff will input the application data.
- ✓ Online user registration (Student Apply online and his/her login portal is created)
- ✓ Online account management like Student Profile, Academic Detail, Program preferences, Password Recovery, Reset Passwords, and Profile Upgrade etc.
- ✓ Online customized application form
- ✓ Auto-generated Admission form
- ✓ Auto-generated Admission unique form no
- ✓ Auto-generated Prospectus voucher slip (pay through bank or online)
- ✓ Auto-generated Acknowledgement Email & SMS
- ✓ Auto time distribution for online test
- ✓ Auto-generated Entry Test Admit Card (after payment student can download Admit Card having full detail of test date and time and venue).
- ✓ Stop in-eligible candidates from applying
- ✓ Applications Status tracking like No. of applications received, No. of applicant paid prospectus fee, no. of applicant appear in Entry Test, No. of applicant called for Interviews, No of Applicants granted admission.

- ✓ Monitoring Admission target
- ✓ Monitoring Day wise applicants applying, current login applicants
- ✓ Applicants statistics on the basis of programs, city, eligibility
- ✓ Very strong Students follow-ups & Guidance process, to monitor every student admission process and guidance of student till admission complete. Complete follow-ups of students Phone Calls, SMS & Emails if student not yet paid fee, why not yet appear in entry test etc.
- ✓ Successful Candidates List
- ✓ Successful students are enrolled in Batches.
- ✓ Reduced paperwork
- ✓ Generate and print Campus wise/ Department wise/ Faculty wise applicants list
- ✓ Automatic GP and merit list generation from the system
- ✓ Customized advanced reporting
- ✓ Student can view online admission offices and personnel contact in case of any issue related to his/her admission

8.3 Online Admission Data Integration with QEC

Online Admission data is very crucial used by QEC which is an import part of Institution Performance Evaluation (IPE), Self-Assessment Report (SAR) and required during Accreditation Team visits like

- ✓ No. of Applications received in a particular Year/Semester
- ✓ No. of Applications granted Admission
- ✓ No. of Applications rejected
- ✓ Faculty, Department Program Wise No. of Applications and Enrollment

10-Academics Module

Academics Module focuses on university Academic System. Following are some of the Processes in Academics Module.

10.1 Campuses

- ✓ CMS can be used in multiple campuses.
- ✓ CMS provides the option to define multiple campuses, their addresses and contact numbers etc.
- ✓ CMS User (Employee) by default has access to his/her own campus.
- ✓ CMS Administrator may grant multiple campuses rights to users if required.
- ✓ Campuses logically divided University into multiple manageable virtual units.
- ✓ Each campus may operate separate Accounts Process like Trial Balance, Profit & Loss, and Balance Sheet etc.
- ✓ Multiple Campus feature also separate Academic Process like course offerings, Add & Dropped period, Faculty List etc.

10.2 Faculties

- ✓ Every University is consisting of multiple faculties like Faculty of Engineering Science, Faculty of Business Administration & Faculty of Health and Medical Sciences etc.
- ✓ CMS provides the option to define multiple faculties
- ✓ Faculty is also a logically manageable unit that separates Academic and other CMS process.
- ✓ CMS User (Employee) by default has access to his/her own Faculty.
- ✓ CMS Administrator may grant multiple faculty rights to users if required.

10.3 Departments

- ✓ Each Faculty may have multiple departments which manage & separate some process related to department like departmental wise faculty list etc.
- ✓ CMS provides the option to define multiple departments
- ✓ CMS User (Employee) by default has access to his/her own department.
- ✓ CMS Administrator may grant multiple department rights to users if required.

10.4 Institutes

- ✓ University may also have some institutions structure to further manage process institute wise.

10.5 Programs

- ✓ University offer admissions in multiple programs.
- ✓ CMS provides the option to define multiple programs
- ✓ Each program definition needs the following compulsory attributes
 - *Program Name & Degree Name*
 - *Program minimum and maximum duration in years*
 - *Eligibility criteria for program admission*
 - *No. of semesters in program*
 - *Program Learning outcomes (PLO)*
 - *Minimum CGPA required to eligible for degree issuing etc.*

10.6 Courses Catalog

CMS provides a centralized repository for users to create and maintain a catalog of all training courses modules/subjects, workshops, and topics offered by the institution as:

- ✓ Each program is consisting of multiple courses
- ✓ CMS provides the option to define multiple courses
- ✓ In Courses definition process you define all the courses offered in university with respect to Faculty.
- ✓ During course definition you have to provide all detail of the course like
 - *Title of the Course*
 - *Course Code*
 - *Credit Hours & Teaching Hours*
 - *Pre-Requisite of the course*
 - *Course Objective*
 - *Course Outline*
 - *Course Contents*
 - *Course Learning Outcomes (CLO)*
 - *CLO mapping with Program Outcome (PLO) etc.*
- ✓ Courses are then assigned to batches according to Board of Study approval.
- ✓ One course can be assigned to multiple programs batches
- ✓ Ability to define whether course is credit or not for credit including default grading basis, or specify the course as non-graded.
- ✓ Subject components such as lecture, laboratory

10.7 Batches

- ✓ Students are enrolled in specific Batch define for every semester like Spring & Fall.

- ✓ CMS provides the option to define multiple batches
- ✓ Each batch is consist of the following settings
 - *Semesters In Batch*
 - *Courses in each semester (Batch Plan)*
 - *Grading criteria*
 - *Account package (Admission Fee, Tuition Fee, Per Credit Hour Fee etc)*
 - *Batch starting date & Session information like Spring-2019,Fall-2019*
 - *Minimum credit hours for student to eligible for degree.*
- ✓ Batch control the overall process of correct curriculum taught. Batch is a logical unit of students, courses, grades, credit hours and account package like per credit hours fee or per course fee etc.
- ✓ Another prominent process in Batches is Batch Promotion Process. Batch promotion from one semester to another is compulsory because batches current semester has a vital role in course offering process.
- ✓ At last batches are completed and students are granted degree.

10.8 Students Enrollment

Students can be enrolled in already define batches. Following activities are carried out automatically during enrollment of students

- ✓ Student Personal information & Academic details are entered manually or auto fetches information from Online Admission Module if implemented.
- ✓ Unique ID of student generated during enrollment process
- ✓ Semester Package, Per course fee or per credit hour package automatically applied on student.
- ✓ Student Login Portal is activated as
 - ***Username = student unique id***
 - ***Password = date of birth of the student***
 - Student can change his/her password after login any time.

10.9 Student Academic Center

Student Academic Center is consist of multiple sub process like

- ✓ Student Profile: Student profile is used to manage student personal info, general info, guardian info and student picture etc.
- ✓ Student Transfer: This process is used to transfer student from one batch to another batch or from one program to another program by applying complete legal and equivalency techniques.

- ✓ Student Deactivation and Re-Activation: Left students are marked deactivate and upon re-joining can be reactivated in CMS. This process is vital to generate the dropped out list etc. The system track and maintain an effective-dated history of the status of a student and also has the ability to process the following
 - Activation of student record
 - Deferment (e.g. because of National Service)
 - Leave of Absence and Return from Leave of Absence
 - Student Withdrawal
 - Dismissal
 - Suspension
 - Completion of course/program
 - Transfer to another course/program
 - Passout student
- ✓ Students Previous Academic Detail: In this process you can records the previous education history of student from Matric to onwards.
- ✓ Student Login Password: This process is used to change the student login password if forgotten by student. CMS also provide the option of forgot password option and reset student password and inform student by SMS & Email alerts.
- ✓ Student RFID cards issuing history: RFID cards issued to student or not a completed history of card issuing to students.
- ✓ Student SMS Logs: This process record all the SMS and Email alerts history of students and management and student by itself can view this SMS & Email logs.
- ✓ Student online request like Enrollment form, Clearing Form etc.

10.10 Student documents verification from Board / University

- ✓ This process is used to show either the student documents are verified from board/university before granting degree.
- ✓ Board verification is a complete process where the new students documents are send to related boards/university for verification to avoid fake admission.
- ✓ This process provide the option to generate a list of students for document verification with a proper letter and Bank Draft
- ✓ The process further provide the option of Sending, Receiving the document

10.11 Student Complete removal

- ✓ This process is used to delete the student record if mistakenly enrolled.
- ✓ Student enrollment can be removed only if student do not have any dependent records like fee paid, registered in courses etc.

14- Course Offering & Scheduling

Scheduling module is all about scheduling like classes schedule, examination schedule, Course Registration Schedule and Add & Drop schedule. This module also keep track of all the process like courses offerings, Course registration etc. Following are different process in this module

14.1 Offering Courses

In course offering process Academic Coordinators offered courses for every program for Spring, Fall and Summer Semesters. The process is done by CMS automatically and the Coordinators just update the time table by putting Teacher name, Days and Room No etc. In this process some limits are define like

- ✓ Registration Start Date: Students can only registered courses after registration start date and system provide alerts to student that how many days left to start registration.
- ✓ Registration End Date: Students cannot register courses after end date. Normally student gets registered within 15 days' time limit.
- ✓ Capacity Limit: Courses needs capacity limit to maintain strength in a class. Normal class strength is 50 students per class.
- ✓ Days Limit on Failure Students: When the registration starts the failure students cannot register their failure courses directly, they wait till this limit before the regular students get registered to avoid regular students from Class Capacity Limit. Mapping facility is also not available to student during this limit.
- ✓ Add and dropped Date: During Add & Dropped period student may dropped only two courses, but can add as many courses as needed till the credit hours limit.
- ✓ Courses and Teachers Evaluation Start Date: Registered student can fill Courses Evaluation and Teacher Evaluation QEC Proforma after this date. This date is normally 2 weeks before the semester end.
- ✓ Summer Semester Limits: Summer semester need some extra limit like Per Credit Hour Fee, maximum Number of Credit hours limit etc.

14.2 Course Registration Limits

In this process some limits are defined before student get registered in courses like

- ✓ Credit Hours Limit: Students cannot register credit hours more than specified in limit (normally 21 credit hours). Permission from high authorities is required to bypass this limit in certain situation for the final semester students only.

- ✓ Balance Limit: Students cannot register courses if he/she has previous outstanding balance. Permission from high authorities is required to bypass this limit.
- ✓ CGPA Limit: Student below certain CGPA like 1.8 cannot register courses by itself. All those students must meet Head of Department before register to give them failure courses and allow them less credit hours for their CGPA improvement.
- ✓ No. of Courses Failure Limit: Students having multiple failure courses (normally 4 or more than 4 courses) cannot register new courses; they can only register failure courses. To register new course, Students need attention of Head of Department.
- ✓ Failure Course Registration Limit: Students having failure courses to register must wait for 2 or 3 days because normal students registered first to avoid Capacity Limit for regular students.

14.3 Normal Course Registration Process by Student

After course offering student can registered courses online using his/her portal with the following limits

- ✓ Student can only registered courses related to his/her batch course plan
- ✓ Student cannot violate pre-requisite of the course not cleared by student
- ✓ Student cannot violate course clashes
- ✓ Student can only registered course in the time limits. Normally course registration limit is 15 days.
- ✓ Students can registered courses in others programs if mapping are allowed by high authority, but cannot violate batch plan.
- ✓ Student cannot violate maximum class capacity limit
- ✓ Student cannot register failure courses in first 2 or 3 days of registration

14.4 Normal Course Registration Process by Academic Coordinators

If certain students are unable to register courses due to some limits then Academic Coordinator can also register students in courses. Academic Coordinator normally register student in courses in situation like

- ✓ Registration time limit is expired
- ✓ Student CGPA is less than required limit and coordinator give him/her failure courses first or give him/her some courses for improvement
- ✓ Student have more than failure courses limit and can registered new courses and having clash problem in failure registration

14.5 Equivalency Course Registration Process

Equivalency course registration process is very crucial process and only Head of Departments has access to this rights. HOD use this process in situation like

- ✓ Student fail in a subject to register but the failure course is not offered any more and HOD give this course in equivalent to other course (only if the content match)
- ✓ Student fail in a subject to register but the failure course is not offered any more and the offered course title match but differ in credit hours

Equivalency course registration process cannot violate student Marks Sheet, student Marks Sheet reflect the course with the same course code and title approved in his/her batch plan.

14.6 First Semester Auto Registration

- ✓ It is recommended to train the first semester students how to login to his/her portal and registered courses, but if in certain situation you need to register the students automatically then this process is used.
- ✓ Special process available to view / monitor the first semester students not yet registered

14.7 Batch Auto Registration

- ✓ Mass enrolment (groups of students are enrolled en-masse into common or compulsory subjects; prescribed course curriculum) based on the program/course structure.
- ✓ Mass enrollment is possible if pre-requisite and sections are not an issue.

14.8 Student Finance during Course Registration

- ✓ The system is fully integrated with Student Finance modules and there is no duplication of student information.
- ✓ Tuition and other fees are automatically calculated based on the enrolment information in Student Records. Likewise, when a student withdraws from the institution or drops subjects, any impact on fees automatically adjusted.

14.9 Find offer Courses

- ✓ Most of the time a quick process is required to find either a certain course is offered or not and either capacity is available or not to help HOD and Coordinators to better utilized the course registration process.

14.10 Find Clash again offer Courses

- ✓ Sometime course time table need to modify, so before modify this process display all the clashes and guide you that either you can change the timetable accordingly or not.
- ✓ This process also suggests the vacant slot to adjust course timing.
- ✓ Timetable changes is possible if there is no clashes available with the new timings

14.11 Registered and Unregistered Students

- ✓ During registration process this process will help you to find the statistics of registered and unregistered students.
- ✓ This process allows SMS & Email alert to students to register as soon as possible.
- ✓ This process is very helpful for high authorities to monitor the registration process online.
- ✓ This process provides you the list of active student not registered yet to contact them on time. System also has the capability to send SMS and Email alerts to student not registered yet.
- ✓ This process will also help you to find out the completed batches students get registered.
- ✓ Completed batches students registration monitoring is very crucial because semester contribution amount to be applied on completed batches students.

14.12 Daily Classes Monitoring Sheet

After registration and commencement of classes Head of Departments can download the daily classes schedule on daily bases to monitor the smooth running of classes. Student Attendance by RFID cards strongly depend on this process where attendance are marked through RFID cards by class timing. This is a very strong process to generated statistics that how many classes was scheduled today and how many classes were not taught by giving proper remarks. In simple worlds this the daily classes schedule of university. One can download the following different reports from this process

- ✓ Daily Classes Monitoring Sheet with teacher machine timings and student's attendance status (No. of absent and present students in a particular class)
- ✓ Print blank attendance sheet to record student attendance manually on paper (applicable if RFID attendance marking process is not operational)
- ✓ Print Single class student's attendance with sessions hours taught & Absent (A) or Present (P) Status of the student date wise.

14.13 Teacher Timetable & Teaching Load

- ✓ These two processes are used to generate teacher timetable & teacher's teaching loads for management decisions.
- ✓ The solution supports instructor workload feature that enables monitoring of the instructional and no instructional workload for selected faculty, instructors, and staff.

14.14 Download Course Profile and Contents

- ✓ Teachers & Students can download the course profile and course contents from CMS using his/her login credential for the courses related to them.
- ✓ Course Profile must include the textbook materials required for the class such as
 - Course material type
 - Course material status
 - ISBN number
 - Author
 - Special instructions

14.15 Hours Taught & Hours Remaining

- ✓ Teachers & Higher authorities can monitor the No. of hours taught by teacher and No. of hours remaining for every individual course.
- ✓ Every teacher in personal and Department at cohort level check the hours taught and hours remaining process to arrange the makeup classes for missing hours and to complete teaching hours and syllabus on time.
- ✓ CMS also provide the facility to generate SMS and Email alerts to teacher running short of teaching hours.

19-Student Attendance System

Accurate and timely recording of student attendance is always a challenge. Strong course registration & scheduling processes ease this process by using three different very efficient methods for recording student attendance.

- a) Student Attendance from Attendance Sheet:
- b) Student Attendance By Teacher online:
- c) Student Attendance By RFID Cards through smart device:

As soon as the attendance is marked it reflects on student portal to eliminate the chances of errors. Student is always aware of his/her attendance. Student Attendance is strongly linked with Examination System where students having attendance percentage less than the required percentage will not be allowed to set in exam.

19.1 Student Attendance from Attendance Sheet

- ✓ In this method teacher can download attendance sheet from his/her login portal on daily bases (teacher can only download sheet in current date) marked student attendance in the sheet and submit the sheet to Program Coordinator.
- ✓ The Coordinator properly signs the Monitoring sheet with all attendance sheets gathered and submit the records in computer section for entry.
- ✓ During this process the Coordinator is responsible to collect sheets using monitoring sheet.
- ✓ This process is available in CMS but not recommended due to delay in attendance feeding and student cannot check his/her attendance in real time.

19.2 Student Attendance by Teacher Online

- ✓ If computer is available in every room / lab then the course teacher during class timing mark the students' attendance online.
- ✓ Teacher cannot mark attendance after the class timing is over.
- ✓ This process need proper monitoring system that the teacher marking attendance on time
- ✓ This method is slow and taking time of teacher and also need hardware resources in every room.
- ✓ This process is available in CMs but not recommended one.

19.3 Student Attendance by RFID Card through Smart Device

- ✓ Attendance Staff enter to every class on class timing with smart devices where the class students show his/her RFID card to smart device and attendance are marked with no time.
- ✓ This is one of the best & recommended methods used in today scenario where Class Attendance and Class Monitoring process completed at once.
- ✓ In this process the student on real time can check his/her attendance online
- ✓ This process needs attendance staff/personnel to mark student attendance
- ✓ This process is very efficient, accurate and recommended one.

19.4 Student Attendance Statistics

Following statistic can be generated on daily bases like

- ✓ No. of students Absent in Class, Batch, Program, Department & Faculty
- ✓ Email and SMS alerts to absent students
- ✓ Daily Attendance percentage course wise, batch wise ,program wise & department wise
- ✓ No of classes not conducted today (with proper remarks like teacher not available, teacher available but students not available, students on official tour etc)
- ✓ Individual student attendance report
- ✓ Change Individual student attendance if some mistake found (this option require special permission)
- ✓ List of students falling short of required attendance percentage

19.5 Hours taught and hours remaining

- ✓ This is a very crucial process where each class teacher can view hours taught and hours remaining for a course. For example if a teacher teaching three credit hours course then the teacher must complete 48 hours.
- ✓ If the teacher is short of any hours the system generate SMS and emails alerts to teacher to arrange make up classes to complete the classes before the semester closed.
- ✓ This process keeps track of every course hours taught and hours remaining and identifies the name of teachers with their courses running short.
- ✓ This process is strongly depend on student attendance entry, delay in student attendance badly affect this process which is a nucleus of Academic Quality because if classes are not completed properly then it is not possible to complete the syllabi which decrease the academic quality.

19.6 Makeup Classes Scheduling

- ✓ This process helps in to arrange makeup classes
- ✓ The process helps in to identify the available free slot to teacher to schedule his/her class and avoid any clash with students, room and lab etc.
- ✓ Makeup class process is very important to complete the teaching hours and course syllabi in time.
- ✓ CMS on regular bases identify short coming classes and on regular bases generate Email and SMS alerts to teacher to reschedule the classes before the shortfall come severe.
- ✓ Student attendance at make-up class sessions is strongly recommended because it affects the student attendance percentage required to eligible for exam.
- ✓ Class tests, quizzes, or other graded assignments cannot be administered and assignment cannot be due during a reschedule class session.

19.7 Student Attendance & Examination Admit Card

- ✓ Student attendance percentage is strongly integrated with student eligibility to set in exam.
- ✓ According to University policy student will not be eligible to set in exam in a course in which he/she has less than required attendance percentage.
- ✓ The subject name in admit card and Exam Attendance sheet is marked strike out, that indicate that the student is not eligible.

19.8 Student Attendance & Visiting Teacher Salary

- ✓ Visiting teacher payment is strongly integrated with Machine Time In / Out plus No. of Hours taught by teacher.
- ✓ No of Hours taught is calculated when student attendance in a particular classes is recorded In CMS.
- ✓ No of Hours taught by visiting teacher in a given date range is calculated by CMS and salary is calculated.

22- Normal & OBE Related Examination

Examinations are used to measure a student's knowledge and understanding of the subject they have been studying. CMS Examination Console facilitates the examination Department of the university. Following are different examination processes.

22.1 Examination Process

- ✓ When a course starts to run at the beginning of a semester, the assessment parameters will be set up in the system to define the criteria for the calculation of the assignment marks and the overall continuous assessment score.
- ✓ The system allows for breakdown into Assessment/Coursework and Exam weightage components e.g, 40% coursework, 60% exam
- ✓ The system allows for multiple weighted components and sub- components e.g., Test 40%, Quiz 20%, Assignment 20%, Practical 20%, Quiz 1, Quiz 2, Assignment 1,2 etc
- ✓ The system allows for specific courses to count towards GPA and others not towards GPA.
- ✓ The system automatically computes Grade Points, GPA and Cumulative GPA, cumulative and semester credits.
- ✓ The system provides marks entry function for both assessment components and final exam and automatically computes the marks and grade upon marks submission.
- ✓ The system control marks entry for assessment and exam to authorized users only.
- ✓ The system freeze marks entry based on user-specified cut-off date.
- ✓ The system track exam absentees and don't allow the users to enter the exam for absent students.
- ✓ Ability to post the grades to grade roster for review and approval
- ✓ Ability to withhold the grades from student's view until it is finalized and approved
- ✓ Able to maintain multiple grading scheme
- ✓ Able to maintain multiple grading basis for each grading scheme
- ✓ Able to maintain multiple grades and its points
- ✓ Ability to use a different grading scheme for different groups of student e.g. if an undergraduate student enrolls in a graduate course, then the system should allow exception where the undergraduate student will be graded using the undergraduate grading scheme
- ✓ The system provides different options to release results to students including:
 - (a) Student Self-Service
 - (b) SMS (interface with SMS gateway)
 - (c) Mobile apps
 - (d) Results Slip
- ✓ Sufficient controls have been implemented to avoid accidental release of results.

22.2 OBE Examination Process

- ✓ Teachers teaching courses related to OBE needs to link each exam activity like Quiz 1, Quiz 2, Assignment 1, Assignment 2, Mid Exam Question 1, Mid Exam Question 2, Final Question 1, Final Question 2 etc. to CLO and PLO provided by department against each course.
- ✓ Teacher cannot change CLO or PLO for courses but link examination activities to already defined CLO and PLO mentioned and approved for course.
- ✓ Teachers teaching courses related to OBE cannot record any exam activity without link to CLO and PLO with proper weightage.
- ✓ System automatically generate the OBE Sheet for teacher after putting exam and generate the CLO and PLO attainment
- ✓ CMS also provide the option to fill CQI Form for the courses in the light of CLO and PLO attainment in the course.

22.3 Mid and Final examination Schedule

Very strong process used to schedule examination and auto correct clashes. It is Impossible to design manual examination schedule because failure students have classes in multiple places.

This process is consist of following sub process

- ✓ Create examination schedule on the bases of Campus, Faculty, Departments or Programs by taking Exam Name, offer types, no of session, total seats available as parameters to decide exam timetable.
- ✓ Process also has the capacity to schedule Lab Courses or not. Lab courses are normally not part of the regular schedule.
- ✓ During examination schedule process option of “Status for Students & Teachers=No” means that timetable is not yet finalized it is under construction and will not visible to students or teachers online.
- ✓ When the schedule is completed “Status of Students & Teachers=Yes” means now student and teacher can view examination timetable online from portal.
- ✓ Students can now download admit card using University policy like Student Balance is cleared, Teacher and courses evaluation is done by the student etc.
- ✓ Teacher portal also show the timetable schedule and teacher has to submit papers etc.
- ✓ Examination department can download Examination timetable, Examination Attendance sheets with student pictures and distributes sheets for attendance marking.

22.4 Record Student Exams

After successful Examination conduction process, teachers now records examination grades against each student registered using online portal. Following are some of the sub process occurring on departmental bases before the examination result sheet submitted in Examination department for result declaration.

- ✓ Teacher records grades against students and print the “Pending Result Sheet” for verification. Teacher can change pending result any time if needed.
- ✓ Internal departmental meetings on pending result sheet and give approval for the result completion.
- ✓ Teacher change the status of result sheet from ”Pending” to “Completed” print it and duly signed by teacher and Head of Department and submitted in Examination Department.
- ✓ After completing the result sheet teacher will be not able to edit the sheet further.
- ✓ Special permission needed to change the sheet from “Completed” to “Pending” Status

22.5 Completed and Pending Result Sheets

- ✓ Examination Department and other high authorities are always a click away to monitor the Completed and Pending Result Sheets and can easily monitor the delay in result.
- ✓ Examination Department will only receive Completed Result Sheets
- ✓ Examination Department has the rights to change Completed Result Sheet to Pending Result Sheet again for teacher to edit exam sheet and demand for new completed result sheet properly signed by HOD and Dean.
- ✓ Completed Result Sheet are posted to Announce the Result
- ✓ Posted Result Sheet to Pending Status again need very special and high level permission

22.6 Result Declaration

- ✓ Examination Department “Post” all the “Completed” Sheets and announce the Result.
- ✓ After posting the result is automatically display on student portal.
- ✓ Examination department can also print the “Declared Result” for record purpose or to past on Notice Board etc.
- ✓ Very crucial and high authority CMS rights are needed to modify the declared result in future.
- ✓ All the changes are recorded in audit trail for reference.

22.7 Grading System

- ✓ Result can be declared on the bases of Relative Grading or Absolute Grading System.
- ✓ In case of Relative Grading, if number of students in a course is less than required number (10 or 20 students as per university policy) then it will be considered as Absolute Grading System.

22.8 E- grades

- ✓ E-Grade (Equivalency Grade) can be allowed to students under university policy.
- ✓ Mostly E-grade is awarded when enrolled student is transfer from other university with credit Transfer policy.

22.9 I- grades

- ✓ I-Grade can be allowed to student under university policy.
- ✓ In most cases I-grade students need to appear in the final exam when offered without fee.

22.10 W- grades

- ✓ W-Grade (Withdrawal Grade) can be allowed to student under university policy.
- ✓ In most cases W is appeared in student transcript instead of 'F' grade.

22.11 X- grades

- ✓ X-Grade (Cancel Grade) is some time used to cancel the course not to print and consider in cgpa calculation for a student under some circumstances like fail in some elective course and now passed alternative elective course instead of the failed elective course etc.

22.12 Freeze Semester

- ✓ Freeze semester option is available for students to freeze semester under university policy.

22.13 Official & Unofficial Transcripts

- ✓ System has the ability to maintain multiple transcript templates and ability to configure different transcripts for different certification courses / Programs
- ✓ Official and Unofficial transcripts / OBE Transcripts are available for downloading in different university approved pattern / format.
- ✓ Student can download Unofficial transcript any time using his/her login portal

22.14 Credit Transfer

- ✓ System has the ability to handle transfer credit manually on a case by case student basis.
- ✓ Showing transfer credits in Transcript with 'E' (Exempted) or with actual grade is depending on university policy.

22.15 Degree Issuing

- ✓ The system track degree requirements allowing users to define, track and maintain course and milestone requirements and policies that a student must satisfy in order to be certified, graduate or complete a degree program
- ✓ The solution allows users to define and maintain the graduation and progression rules for the different programs and courses run by the university.
- ✓ The system provides a Student Self-Service function for students to view their Degree Progress report.
- ✓ The system identifies and generates a list of students who have satisfied the graduation requirements.
- ✓ The system shall provide option for student self-service function to Apply for Graduation.
- ✓ CMS provide the option of degree issuing to student.
- ✓ This process keep track of the students to whom university have granted degree with complete detail like issuing date, Transcript serial no, degree serial no etc.
- ✓ According University policy CMS provide the facility of online degree verification.

27-Accounts Module

Account Module allow automation of basic accounting information which includes Journal, ledger, trial balance and balance sheet etc., with the dual benefits of reducing the workload of the Accounts department as well as increasing the efficiency of the department by standardizing accounts processes. Following are different sub process involved in Accounts module

27.1 Student Financial

- ✓ The system manage, maintain, and update students' financial accounts by tracking and calculating tuition fee, other fees and charges, receivables, billing, installment payment plans, and refunds.
- ✓ The system also manages, maintain and update organization accounts by tracking and calculating amounts due from corporate customers, sponsors, or other organizations.
- ✓ The system shall also provide for the following types of fees:
 - Application Fees
 - Deposit Fees
 - Class-based fees
 - Subject/Module or Subject List based fees based on credit units,
 - Optional fees - e.g. parking fees
 - Transaction fees - e.g. fees charged for dropping a subject/class
- ✓ System is capable to charge different fees for different types of students e.g. international students are charged for visa while local students are not
- ✓ System is capable to create multiple groups of tuition rules, allowing for charging of tuition and fees to students based on the criteria defined
- ✓ System is capable to charge student a term-based fee at the start of the semester or based on based on student enrollment i.e. the modules they are enrolled into, or a combination of both
- ✓ Able to define the due dates of the fees
- ✓ Able to calculate tuition (or other fees) based on the institution's academic calendar
- ✓ Able to calculate fees for one student or by batch and to have tuition calculation controls such as by career, program, terms, etc)
- ✓ Able to define fees as a flat amount or calculated amount using a rule/formula or a combination of both may be applicable depending on the type of fees
- ✓ Able to define waivers (fee concessions, subsidy or discounts) based on criteria
- ✓ Able to cater for changes in fee policies for new student intake while the previous student intake will follow the previous fee charges
- ✓ Process to monitor students pending vouchers, expired vouchers, deposit vouchers.

- ✓ Auto tax calculation process in student accounts, if student payment exceed the limit then taxation is applied automatically (normally ≥ 200000 in a year)
- ✓ Auto Security Deposit fee process maintenance in student ledger
- ✓ Process of student ledger maintenance in dual currency
- ✓ Complete process for student other fee not part of student ledger like document verification fee, duplicate card issuing fee, fine and penalties. These fees are also integrated with student taxation process.
- ✓ Able to view student account to review the charges
- ✓ Able to have an administrator view of student account which allows drilling into by term/semester and each item types (charges) and payment history
- ✓ Able to bill and collect payment from students using an invoice rather than by charges
- ✓ Able to allow students to make payments for a specific invoice rather than an overall account
- ✓ Able to only pass charges to GL once they have been invoiced
- ✓ The system caters for different payment methods such as cash, cheque, direct debit (e.g. GIRO) or combination of payment methods.
- ✓ Able for students to convert the payment to installment basis with ability to spread repayment over a user-defined period and to calculate interest where necessary
- ✓ The system also provides facilities to maintain students' repayment records and repayments status and generate reminders according to the normal repayment schedule and to link with the defaulter and deferment subsystem as appropriate for the appropriate follow-up actions
- ✓ The system also provide facilities for a defaulter subsystem to maintain the students' records, calculate surcharge and penalty charge and initiate actions on hold for some University processes, e.g.
 - Withholding students' final course results
 - Withholding student graduation
 - Student cannot register new course if previous balance is not cleared
 - Student cannot download Admit card online
- ✓ Able to block students from enrollment and exam if they have not paid the tuition fees
- ✓ Able to interface to the bank for payment made via the bank
- ✓ Able to interface to bank payment gateway
- ✓ Able to process and control credit card payments
- ✓ Two very quick processes for student vouchers receiving in Bank or Cash are Barcode Scan Method and Upload Bank Statement to CMS.
- ✓ Able to allow students to view account details online
- ✓ Able to allow students to make payments online
- ✓ Able to process refunds for an individual student or in batch

27.2 Chart of Accounts

- ✓ The chart of accounts uses a series of codes to identify assets, income, expenses, and equity being tracked by the accounting system.
- ✓ The chart of accounts determines the level of detail of the information tracked and the reports generated by the accounting system.
- ✓ The chart of accounts can use sub-coding at the department, location, project, funding source, division, work order or activity level to gather more detailed information if required.
- ✓ The chart of account is flexibly configurable with capability to support required number of child levels.
- ✓ General allows users to define the codes within the General Account dimension according to the standard financial statements classification (Expenditure, Revenue, Capital, Receipts, Assets, Liabilities and Equities). The General Ledger must recognize this standard classification.
- ✓ The system has the capability either automatically or manually as per users' requirement to carry forward balances between fiscal years and close expenditure accounts.
- ✓ The General Ledger supports creating Chart of account codes at summary level and at posting level. At summary level the package should allow users to define multiple summary levels with no restrictions on the number of summary codes.

27.3 Accounts Vouchers and Account Reports

- ✓ CMS can generate different types of accounts voucher like Bank Payment, Cash Payment, Bank Receipt and Cash Receipt and Journal Vouchers
- ✓ Able to generate different types of accounts reports like General, Leger, Trial Balance, income statement, Payable and Receivable Accounts and Balance Sheet etc.
- ✓ The system also supports booking of expenditure and liability upon entry of the invoice.
- ✓ The system allows capturing of Vendor Debit / Credit notes, advances, payments, cash receipts for refunds and discounts.
- ✓ System captures employee related payments for advances and prepayments. Employee expenditures, Employee debit / credit notes should be match able against each other and with advances.
- ✓ System supports a mechanism of recording and controlling petty cash expenditure for each of the petty cash funds maintained by different custodians.
- ✓ System has the capability to link the payments functionality with the payables functionality where applicable and should allow payments once the expenditure gets successfully through matching and approvals.

27.4 Withholding Tax Rate, Sections & Code

- ✓ The system maintains supplier details with NTN number etc.
- ✓ This process set withholding Tax rate, sections and code for the year and then generates the tax amount to be paid in FBR, the PSID and CPR code from FBR is recorded in CMS for future reference required.
- ✓ This process also generate tax certificate for each taxpayer account with proper PSID and CPR detail.

27.5 Budget System

- ✓ CMS have a separate and complete process for Budget system on the basis of Campus, Faculty & Departments.
- ✓ In Budget module one can create budget for Fixed Assets, Salaries and Allowances, Other Expenses, Fee Income, Hostel Income, Transport Income, Other Fee Income, New Admission, Income Existing Students and Vacant Positions etc.

31-Hostel Management Module

Hostel support system specifically designed to allow students, warden & caretaker to monitor and manage hostel activities prolifically. The system provides monitoring of essential information pertaining to institutions students residential arrangement from resident status, location, emergency contact information, maintenance complaints and dues status

31.1 Different types of Hostel Process

Following are different types of process used in Hostel Management

- ✓ Configure and define Multiple Hostel buildings, blocks, rooms, floors
- ✓ Hostel room availability
- ✓ Enrollment of Students in different Hostel
- ✓ Withdrawal from Hostel Enrollment
- ✓ Hostel fee setup (On Monthly or Quarterly Base)
- ✓ Food etc. Fee Package
- ✓ Student Hostel Voucher generation
- ✓ Student Hostel Ledger
- ✓ Hostel Accounts integration with GL
- ✓ Hostel Wise Enrollment List
- ✓ Hostel Wise Outstanding Amount List
- ✓ Customized reports as for students list, student room allotment list, student mess dues

32-Transport Management Module

Transport support system specifically designed to allow students, busses & roots (stations) to monitor and manage transport facility activities prolifically. The system provides monitoring of essential information pertaining to institutions students transport arrangement like student transport bus no, root and dues status

32.1 Different types of Hostel Process

Following are different types of process used in Transport Management

- ✓ Configure and define Multiple Transport busses, roots (stations)
- ✓ Transport seat availability
- ✓ Enrollment of Students in different Transport & Assign Root (station)
- ✓ Withdrawal from Transport Enrollment
- ✓ Transport fee setup (On Monthly or Quarterly Base depending on roots)
- ✓ Student Transport Voucher generation
- ✓ Student Transport Ledger
- ✓ Transport Accounts integration with GL
- ✓ Transport/Bus Wise Enrollment List
- ✓ Transport/Bus Wise Outstanding Amount List
- ✓ Customized reports as for students list, student buses allotment list, student dues

33-HRM & Payroll Module

HRM is concerned with the management of employees from recruitment to retirement & Payroll is related to employee Salary and other remuneration.

33.1 HRM Process

Following are different types of process used in HRM Module

- ✓ Configure and define different setup before employee enrollment
 - Create different types of Designations
 - Create different types of Qualification and Specialization Subjects
 - Nationality
 - Provinces & Cities
 - Blood groups
 - Name title
 - Appointment Nature
 - Leaving Types
- ✓ Job offer Letters
- ✓ Employee Enrollment by assign proper Campus, Faculty & Department
- ✓ CMS is capable to maintain Employee designation history
- ✓ Able to maintain employee leaving history
- ✓ Able to main employee bio-data like name, father name, CNIC etc.
- ✓ Able to main employee Qualification data.
- ✓ Able to main employee Research & Publication.
- ✓ Able to main employee work experience detail

33.2 Employee Attendance

Following are different types of process used in Employee attendance

- ✓ Individual employee duty timings setting (In & Out Timings).
- ✓ Employee attendance recording through Bio-metric device
- ✓ Employee Absentees, Late Arrival and Early departure are calculated.
- ✓ SMS & Email alert on absentees, Late arrival and Sign missing
- ✓ Online Leave application process
- ✓ Available and availed leaves statistics for employee
- ✓ Without pay statistic on the bases of absentees.

33.3 Payroll

Following are different types of process used in Employee attendance

- ✓ Setup of Grade wise Basic Salary & Allowances
- ✓ Setup of Fixed Deduction
- ✓ Setup Employee other remuneration
- ✓ Record employee without pay days
- ✓ Generating Employee Payroll
- ✓ Generation Employee Pay Slip
- ✓ Able to manage PF
- ✓ Managing Employee Loans and Advances
- ✓ Employee Absentees, Late Arrival and Early departure are calculated.
- ✓ SMS & Email alert on absentees, Late arrival and Sign missing
- ✓ Online Leave application process
- ✓ Available and availed leaves statistics for employee
- ✓ Without pay statistic on the bases of absentees.

35-Fixed Assets Inventory System

There are many benefits to having comprehensive fixed asset management and inventory practices in place.

35.1 Purchase Requisition

Following process are involved in purchase & Requisition

- ✓ The system is capable to support manual or automatic purchase requisitions (PR) creation, as per user requirements.
- ✓ The system is capable to have automatic purchase order (PO) generation from PR to eliminate duplicate data entry.
- ✓ The system is capable to tie PR number to PO and allow:
 - PO search by PR number
 - PR search by PO number
- ✓ The system supports requisition tracking and inquiry, and to alert Purchasing department on the PR's that should be reviewed and processed.
- ✓ The system must allow users to combine multiple PR's into one PO.

35.2 Purchase Order Creation & Maintenance

- ✓ The system must provide online PO maintenance and inquiry functions to add, change, delete and list PO.
- ✓ Users must be able to locate existing vendors through flexible search facility during PO creation, maintenance and inquiry:
 - search by partial vendor code
 - search by partial vendor name
 - others (please specify)
- ✓ Once a purchase order is confirmed, any further changes to the PO will create a PO new revision. The system should provide a facility to track multiple revisions of the same PO.
- ✓ Re-approval is required whenever a new PO revision is created.
- ✓ Users must be able to create the PO automatically from on-line requisition.
- ✓ System supports consolidate and centralize purchase requirements from multiple projects, cost centers or locations.
- ✓ The system allows users to enter multiple items per PO.
- ✓ There should be facilities to inquiry all outstanding PO's items by:
 - PO and PR number,
 - PO number showing the status of PO

- Item/Part number and category
- ✓ Users must be able to generate PO for:
 - direct item (stock item)
 - indirect item
 - spare part/consumable
 - services
 - others
- ✓ Users must have the option to include extra information or notes to be displayed/printed on PO when required.
- ✓ The system must be able to track the purchase price history.

35.3 Purchase Order Receiving

- ✓ The system must provide on-line PO receipt transaction and automatic update of stock balance and PO status on receipt of items.
- ✓ The system should generate a full audit trail of all receipts to be posted to the GL.
- ✓ There must be a facility to handle material rejects after inspection and reflect on the PO as outstanding quantity.

35.4 Inventory Control System

- ✓ Item/Product Profile
- ✓ Product General Info
- ✓ Suppliers
- ✓ Units
- ✓ Locations

35.5 Inventory Transactions

- ✓ Item Listings
- ✓ Manual/automatic Transactions, Transfer & Adjustments
- ✓ Inventory in/out
- ✓ Goods Receipt Notes
- ✓ Item issuance note/requisition

35.6 Inventory Search Reports

- ✓ Item Search – by category
- ✓ Item Search – by location
- ✓ Item Search – by item description
- ✓ Item Search – by serial number

- ✓ Item Search – by types

35.6 Inventory Transfer & Adjustment

- ✓ Inspection of returned products
- ✓ Inventory Transfer & Adjustments – Outputs
- ✓ Basic lookup reports
- ✓ Intimation letter to party for returned products
- ✓ Inspection report
- ✓ Inventory adjustment
- ✓ Inventory rejections

35.7 Inventory Reports

- ✓ Item listings
- ✓ Activity based analysis [items in/out]
- ✓ Inventory in hand
- ✓ Stock register
- ✓ Suppliers/vendors
- ✓ Purchase requisitions
- ✓ Purchase orders
- ✓ Rejections

38-Library Management System

Library Management System used to manages the catalog of a library. This helps to keep the records of whole transactions of the books available in the library. Following option is available in CMS for Library Management.

- ✓ Library Books Entry its Searching & Reports
- ✓ Library Journals Entry its Searching & Reports
- ✓ Library Magazine Entry its Searching & Reports
- ✓ Ability to Print Barcodes
- ✓ Fully integrated with Student Portal and student can search books
- ✓ Fully integrated with Faculty Portal and faculty can search books
- ✓ Issuing Student Library Card
- ✓ Issuing Faculty Library Card
- ✓ Issuing and Return Books to Students
- ✓ Issuing and Return Books to Faculty
- ✓ Late Return or Lost of Book by Student or Faculty linked with student / Faculty Finance.
- ✓ Multiple campus separate library maintenance
- ✓ Categorization of Books on the bases of Faculty, Programs, Subject, Language ,Discipline
- ✓ Categorization on the bases of Classification number
- ✓ Maintenance of Accession No
- ✓ Maintenance of Publishers and Editions

39-QEC Proforma

The purpose of Quality Enhancement Cell (QEC) is to maintain and enhance the quality of education and research. It is vested with responsibility to develop and implement the Internal Quality Assurance (IQA) practices such as Self-Assessment at program and institutional levels for achieving university vision, mission & goals and attaining enhanced levels of compatibility, both at local and global levels.

39.1 Self-Assessment Report (SAR)

Self-Assessment is a systematic process of gathering, reviewing and using important quantitative and qualitative data and information from multiple and diverse sources about academic programs, for the purpose of improving student learning, and evaluating whether academic and learning standards are being met. In CMS you can generate the following reports for SAR.

- ✓ Student Course Evaluation
- ✓ Teacher Evaluation
- ✓ Faculty Course Review
- ✓ Faculty Survey
- ✓ Survey of Graduating Student
- ✓ Alumni Survey
- ✓ Employer Survey
- ✓ Faculty Resume

39.2 Institutional Performance Evaluation (IPE)

In CMS you can generate the following reports for IPE

- ✓ Faculty-Department-wise list of academic program Faculty – Department – Program - Courses – Semester Wise credit hours for each academic program
- ✓ Faculty – Department – Program – Semester - Course Wise enrollment
- ✓ Faculty – Department – Program Wise Number of Applications & Enrollment
- ✓ Faculty – Department – Program - Wise Student/faculty ratio
- ✓ Faculty – Department – Program – Semester Wise Retention
- ✓ Faculty – Department wise Number of full-time faculty; part-time faculty, on contract faculty, visiting faculty and adjunct faculty with qualification and designations against sanction posts.

40-Student Portal / Student Self Service

A student portal is an online gateway where students can log into to access important program information. An online portal makes it easier for students to access important information from anywhere at any time of day. Portals are commonly used in colleges and universities where prompt information and necessary updates must be readily available to a large number of students.

Student Login Portal consist of the following information related to student

- ✓ Can view List of Offered Courses to Register
- ✓ Can view his/her Class Timetable
- ✓ Can view his/her Attendance Status in each course
- ✓ Can view Exam Schedule
- ✓ Can view his/her Examination results
- ✓ Can download Unofficial General Transcript
- ✓ Can download Unofficial OBE Transcript
- ✓ Can view his/her Approved Courses Batch Plan
- ✓ Can download Course Profile and Course Contents for each courses registered by Student
- ✓ Can view Grading Criteria
- ✓ Can monitor his/her Degree Progress (Credit Hours completed and Credit Hours Remaining)
- ✓ Fill Online Student Course Evaluation
- ✓ Fill Online Teacher Evaluation
- ✓ Fill Grading Form (when graduated)
- ✓ Fill Alumni Form
- ✓ Download Fee Slip to deposit in Bank or Pay online
- ✓ Download different Clearance Forms
- ✓ Can Download Admit Card online if all requirement meets like fee cleared etc
- ✓ Request for Wifi Registration
- ✓ Request for Official Transcript etc.
- ✓ View Department Contact Numbers
- ✓ Search Library Books

41-Faculty Portal / Faculty Self Service

A Faculty portal is an online gateway where faculty can log into to access important program information. An online portal makes it easier for faculty to access important information from anywhere at any time of day. Portals are commonly used in colleges and universities where prompt information and necessary updates must be readily available to a large number of employees.

Faculty Login Portal consist of the following information related to Faculty

- ✓ View class Schedule / Timetable
- ✓ View class Exam Schedule / Timetable
- ✓ Enter Student Attendance
- ✓ View Student Attendance
- ✓ Monitor Class Hours taught and hours remaining
- ✓ Fill Faculty Course Review Form
- ✓ Fill Faculty Survey Form
- ✓ Download Course Profile and Course Contents for each course
- ✓ Can view his/her Attendance
- ✓ View his/her leave balance
- ✓ Apply for Leave
- ✓ Download his/her Pay-Slip
- ✓ Can use other CMS modules assign by the Administrator like Student Course Registration, Daily class monitoring Sheet etc
- ✓ Download different Clearance Forms
- ✓ Request for Wifi Registration
- ✓ View Department Contact Numbers
- ✓ Search Library Books