

Business Process Analysis of University ERP Modules

Selected ERP Module: Student Information Management

Group 11

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ERP Modules

1. Student Information Management Description:

The Student Registration System is the backbone of university enrollment management. It handles admission applications, profile creation, document verification, and course registration. By automating fee calculation, payment collection, and timetable generation, it ensures that the enrollment process is smooth, accurate, and transparent. The system reduces paperwork, minimizes errors, and provides realtime access to academic data.

Key Users:

- Students, Admission officers, Academic staff, Finance staff, Registrar/administration office

High-Level Business Processes for the Entire ERP System

1. New student admission.
 - Collect student applications, Verify documents, If documents valid proceed to enrollment, If invalid request resubmission.
2. Document verification & eligibility check.
 - Check academic certificates, If eligible approve registration, If not eligible reject application with feedback.
3. Student profile creation & ID generation.
 - Input student personal details, Assign student ID, Upload photo, Confirm profile creation.
4. Course registration & subject selection.
 - Display available courses, Students select courses, Check prerequisites, If prerequisites met register student, If not met show error & suggest alternative.
5. Prerequisite course validation.
 - Match students completed courses with course requirements, If validated approve enrollment, If fail notify students.
6. Student ID Generation & Authentication.
 - Generate student ID, Encode access permissions, If successful send ID to student, If fail retry or escalate.
7. Fee calculation & payment processing.
 - Calculate courses and other fees, Present payment options, If payment is successful generate receipt, If payment fails notify students & retry.
8. Receipt Generation & Payment Records.
 - Generate official receipt, Save record in ERP, Notify students.

9. Scholarship & Financial Aid Processing.

- Receive application, Verify eligibility, If approved apply scholarship to fee, If rejected notify student.

10. Hostel/Transport Allocation.

- Student applies for hostel/transport, Check availability, If available allocate, If full add to waiting list.

11. Timetable & Class Schedule Generation.

- Check course enrollment, Allocate class slots, Generate timetable, Notify students.

12. Attendance Tracking & Reporting.

- Record daily attendance, Generate weekly/monthly reports, Notify students with low attendance.

13. Exams & Results.

- Register students for exams, Schedule exam timetable, Faculty enters results, Validate results, If valid publish results to student portal, If invalid request corrections.

14. Transcript Generation.

- Compile validated results, Generate transcript, If complete issue to students, If incomplete hold until pending results are available.

15. Student Status Updates.

- Check academic progress, Update status, Notify students.

16. Academic Progress Tracking & Reporting.

- Monitor semester results, Generate progress report, If behind alert academic advisor, If on track continue normal tracking.

17. Semester Fee Payment.

- Generate semester fee bill, Present payment methods, If payment successful Update financial record & issue receipt, If payment fails notify students & allow retry, If not paid before deadline apply late fee penalty.

18. Communication & Notifications.

- Send alerts via outlook.

19. Alumni Record Management.

- Graduate student, Verify completion, Move record to alumni database.

20. Student Feedback & Grievance Handling.

- Collect student feedback through portal, Categorize feedback or complaint, Assign to the department responsible.

Sub-Processes (Step-by-Step Workflow):

1. Submit admission application → Upload required documents
2. Verify eligibility → (if approved, continue; if rejected, notify student)
3. Create student profile → Generate student ID
4. Course selection → Prerequisite validation
5. Calculate tuition fees → Payment processing → Generate receipt
6. Timetable generation → Notification to student
7. Exam registration → Transcript/records update

BPMN diagram drive link:

https://drive.google.com/file/d/163IMo10k2jQw5qobnaT73P0CWEE5nXI/view?usp=drive_link

Draw.io link:

<https://viewer.diagrams.net/?tags=%7B%7D&lightbox=1&highlight=0000ff&edit=blank&layers=1&nav=1&title=Untitled%20Diagram.drawio&dark=auto#Uhttps%3A%2F%2Fdrive.google.com%2Fuc%3Fid%3D1mi96xo5i3rxP7uGekTnQZztG6vIKcdaG%26export%3Ddownload>