



# UNIVERSITY ERP SYSTEM

## **Group 14**

Module: BP ERP

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## Contents

1. Introduction .....	1
2. Module Descriptions .....	2
2.1 Human Resources (HR) Module .....	2
2.2 Marketing & Social Media Data Module .....	2
2.3 Financial Records Module .....	2
3. Key Users / Roles .....	2
<u>4. High-Level Business Processes .....</u>	<u>2</u>
5. Detailed Sub-Processes .....	3
5.1 HR Module Workflow .....	3
5.2 Marketing & Social Media Workflow .....	3
5.3 Financial Records Workflow .....	3
6. BPMN Diagrams .....	3
7. Conclusion .....	8

## 1. Introduction

This report presents the business process analysis for three selected ERP modules within a university context: Human Resources (HR), Marketing & Social Media, and Financial Management. The aim of this analysis is to transform our understanding of university operations into structured process models that will later guide database design and system development.

## **2. Module Descriptions**

### **2.1 Human Resources (HR) Module**

The HR module is responsible for managing the university's workforce, including academic and administrative staff. Its core functions include recruitment, employee onboarding, attendance and leave management, payroll, and performance evaluations. In a university, this module supports efficient staff management by automating repetitive HR tasks and ensuring accurate records.

### **2.2 Marketing & Social Media Data Module**

This module focuses on promoting the university's programs, events, and achievements through marketing campaigns and social media channels. It enables the university to attract prospective students, engage with current students, and strengthen its brand presence. Functions include campaign planning, execution, monitoring, analytics, and feedback collection.

### **2.3 Financial Management Module**

The Financial Records module manages all monetary transactions within the university. This includes tuition fee billing, payment processing, grants, salaries, budgeting, and expense tracking. It ensures that the university maintains transparency and accuracy in financial reporting while also helping with strategic planning and forecasting.

## **3. Key Users / Roles**

- HR Module: HR Officers, Payroll Administrators, Department Heads, Faculty & Staff.
- Marketing & Social Media Module: Marketing Officers, IT/Media Team, University Administration, Students.
- Financial ManagementModule: University Management, Finance Officer, Student, Payment Gateway

## **4. High-Level Business Processes**

1. Employee management and payroll processing.
2. Student recruitment and promotional campaign tracking.
3. Tuition fee collection and financial reporting.
4. Integration of HR, Marketing, and Finance data into a centralized database.
5. Generation of reports to support decision-making.

## **5. Detailed Sub-Processes**

### **5.1 HR Module Workflow**

1. Recruitment request submission.
2. Application processing and shortlisting.
3. Interview scheduling and candidate selection.
4. Employee onboarding and document verification.
5. Attendance and leave tracking.
6. Payroll calculation and salary distribution.
7. Performance reviews and record maintenance.

### **5.2 Marketing & Social Media Workflow**

1. Campaign proposal drafting by marketing team.
2. Approval by university administration.
3. Campaign execution across platforms.
4. Social media engagement monitoring.
5. Collection of analytics and student feedback.
6. Preparation of performance reports and improvement strategies.

### **5.3 Financial Management Workflow**

1. Fee Structure Setup
2. Student Billing & Invoicing
3. Payment Collection
4. Scholarships & Discounts
5. Penalties & Fines
6. Record Management
7. Financial Reporting & Reconciliation
8. Integration with Other Modules
9. Audit & Compliance

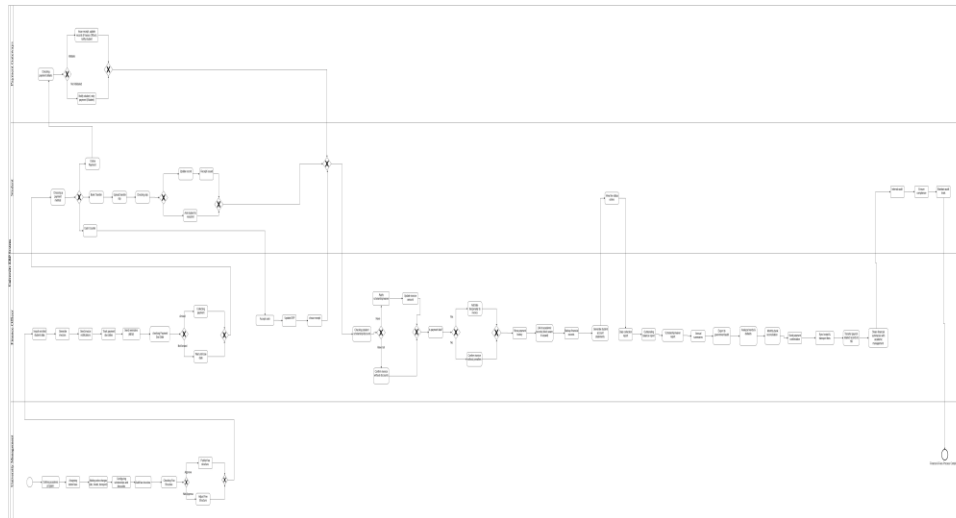
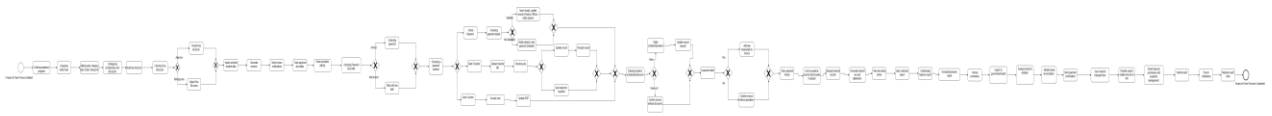
## **6. BPMN Diagram (Financial Management)**

### **Draw.io link**

<https://app.diagrams.net/#G1ZRg585FomDF5VXtgvoYIds56GoVH2QbM#%7B%22pageId%22%3A%22647QdM4EHfONmjgdtTCz%22%7D>

### **OneDrive link**

<https://drive.google.com/file/d/1ZRg585FomDF5VXtgvoYIds56GoVH2QbM/view?usp=sharing>



1. Start-Finance & Fees Process Initiated
2. Task: Define academic programs
3. Task: Assign tuition fees
4. Task: Add extra charges (lab, hostel, transport)
5. Task: Configure scholarships and discounts
6. Task: Audit fee structure for compliance
7. **"Is Fee Structure Approved?"**
  - Yes → Publish fee structure on portal → Move to Billing
  - No → Return to modify structure
8. Task: Import enrolled student data
9. Task: Generate fee invoices
10. Task: Send invoice notifications
11. Task: Track due dates
12. Task: Send reminders for pending payments

13. "Has Payment Due Date Arrived?"

Yes → Proceed to Payment Collection

No → Timer Event (Wait)

14. "Student chooses payment method?"

- Online
- Bank Transfer
- Cash Payment

15. Task: Validate payment details

16. "Was Payment Successful?"

- Yes → Go to receipt & update
- No → Return to retry

17. Task: Receive payment & verify

18. Task: Update payment status

- If Paid → Receive confirmation/receipt
- If Failed → Retry or change method

19. "Does student have scholarship/discount?"

20. Task: Approve scholarship rules

- a. Apply discount/scholarship
- b. Adjust invoice
- c. Maintain audit records
- d. Notify student

If No → Move to Penalties

21. "Is payment late?"

- a. Auto-calculate fines
- b. Add penalties to invoice

- c. Notify student
- d. Track penalty payments

If On Time → Proceed to Records

- 22. Task: Store fee payment history
- 23. Task: Link with academic records (block exam access if unpaid)
- 24. Task: Backup financial records
- 25. Task: Generate student account statements
- 26. Task: View fee status / receipts online
- 27. Task: Daily collection report
- 28. Task: Outstanding balance report
- 29. Task: Scholarship/waiver report
- 30. Task: Annual summaries
- 31. Task: Export reports to audit/government
- 32. Task: Analyze fee trends & defaults
- 33. Task: Monthly bank reconciliation
- 34. Task: Send payment confirmation to Student Management
- 35. Task: Sync hostel & transport fees
- 36. Task: Transfer payroll records to HR
- 37. Task: Share summaries with academic management
- 38. Task: Internal financial audit
- 39. Task: Ensure compliance with regulations
- 40. Task: Maintain audit trail
- 41. End- "Finance & Fees Process Completed"

## **7. Conclusion**

The business process analysis of the HR, Marketing & social media, and Financial Records modules highlights the importance of integrating core university functions into a centralized ERP system. By clearly defining roles, workflows, and processes, the system will ensure operational efficiency, data accuracy, and support for strategic decision-making. These process models will serve as the foundation for database design and system development.