



**Department of Computer Science**

**Quaid-e-Azam University, Islamabad**

**Assignment 1**

**Student Course Registration System**

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05 March 2025

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# Change History

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| --- | --- | --- | --- |
| Version | Date | Changed By | Description |
| **1.0** | 05 March 2025 | Hurr Mehdi | Project Plan |
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## Remarks:

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| Approved By |  | Date |

# Preface:

*This document outlines the project management plan for developing the Student Course Registration System for the CS Office. The system automates course registration, enforces course prerequisites, and enables coordinators to track student progress. The plan adheres to ISO/IEC/IEEE 16326 guidelines.*

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| PROJECT PLAN | **Student Course Registration System** |
| Created by | Group 8 |
| Date Created | 05-03-2024 |

## PROJECT OVERVIEW

## Project Summary

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|  | The Student Course Registration System is a platform designed to assist academic administration for the CS Department. The system will automate course enrollment processes, enforce prerequisite validations, and provide real-time tracking of student academic progress. The platform will replace manual record keeping with a digital solution. Key functionalities include dynamic course scheduling, prerequisite rule enforcement, and automated reporting for academic coordinators, ensuring alignment with institutional policies and reducing administrative overload. |

## Purpose, Scope, and Objectives

**Purpose:**

*The current manual system for course registration and progress tracking is prone to delays, errors, and inconsistencies. This project aims to replace it with a secure, scalable web application that:*

* *Eliminates manual data entry errors.*
* *Enforces academic policies (e.g., prerequisites) programmatically.*
* *Provides stakeholders (students, coordinators, and faculty) with instant access to up-to-date academic records.*

**Scope:**

*The system will encompass:*

* *Study Scheme Management: Upload and update curriculum structures for student batches.*
* *Automated Prerequisite Validation: Rule-based checks during course registration to ensure compliance with academic requirements.*
* *Progress Tracking Dashboard: Real-time visibility into courses completed, grades, and pending requirements for students and coordinators.*
* *Reporting Module: Generate PDF/Excel reports on enrollment statistics, pass/fail rates, and prerequisite violations.*
* *Role-Based Access Control: Secure login tiers for students, faculty, and administrators.*

**Objectives:**

* *Ensure 100% adherence to prerequisite rules during registration.*
* *Provide coordinators with instant access to student academic histories.*
* *Automate deletion of outdated course entries after semester deadlines.*
* *Simplify course registration for students with intuitive interfaces.*
* *Eliminate manual data entry for coordinators through batch uploads and system-generated reports.*
* *Maintain accurate, up-to-date records of student progress and course prerequisites.*

## Assumptions and Constraints

**Assumptions:**

* *Students and coordinators have internet access.*
* *Course registration data (e.g., student IDs, course codes) will be manually input.*
* *Prerequisite data is accurately maintained.*
* *Students will register for courses before deadlines.*
* *The system will support multiple academic batches.*

**Constraints:**

* *Must use Java for backend development.*
* *Project completion within the semester 16 weeks.*
* *Only authorized users (Students, Coordinators, Timetable Coordinator) can access relevant data.*

## Project Deliverables

|  |  |
| --- | --- |
| Deliverable | Description |
| **Project Plan** | *A formal document outlining the project’s scope, timelines, resource allocation, and risk management strategies.* |
| **SRS Documentation** | *A Software Requirements Specification detailing functional/non-functional requirements, use cases, and system constraints.* |
| **System Prototype** | *A mock-up UI design demonstrating core workflows (e.g., course registration, prerequisite checks).* |
| **Functional Application** | *A working system with all core features: prerequisite validation, pass/fail tracking, coordinator dashboards, and report generation.* |
| **Source Code** | *Well-commented Java code, configuration files, and dependencies for reproducibility.* |
| **User Manual** | *A brief guide explaining how students/coordinators can use the system (e.g., registration steps, report generation).* |
| **Test Plan and Reports** | *Documentation of test cases (e.g., prerequisite validation scenarios) and results to verify system accuracy.* |
| **Final Presentation** | *A PowerPoint and live demo summarizing the project’s phases, challenges, and outcomes for academic evaluation.* |

## Schedule Summary

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| --- | --- | --- | --- |
| Task | Start Date | End Date | Deliverables |
| **Planning** | 19/02/2025 | 05/03/2025 | Project Plan |
| **Analysis** | 06/03/2025 | 26/03/2025 | SRS Documentation |
| **Design** | 27/03/2025 | 23/04/2025 | Prototype |
| **Development** | 24/04/2025 | 21/05/2025 | Functional System/User Manual/Source Code |
| **Testing** | 22/05/2025 | 28/05/2025 | Test Reports |
| **Presentation** | 29/05/2025 | 11/06/2025 | Presentation |

## REREFERNCES

* ISO/IEC/IEEE 16326:2019
* Case Study 3 – Problem Description
* University's Course Registration Guidelines
* Relevant Software Engineering Textbooks/Papers

## DEFINITIONS

* **Prerequisite Checking:** Automated validation of required courses before registration.
* **Scheme of Study:** Curriculum structure for a student batch.
* **SRS:** Software Requirements Specification. .
* **Coordinator:** Manages course registration and tracks student progress.
* **Timetable Coordinator:** Views student course registrations for scheduling.
* **Passed Courses:** Courses successfully completed by a student.
* **Skipped Courses:** Courses a student has not taken.