SWE5300 SEMESTER 2 2024/2025

### Coursework Title: Project-Based Coursework for System Analysis and Design

#### **Project Overview:**

Students are required to select any system (e.g., e-commerce platform, hospital management system, university portal, library management system, etc.) and carry out a structured analysis and design process. The coursework will be divided into phases, following standard system development methodologies.

#### **Deliverables and Timeline:**

Each student will submit reports and participate in discussions throughout the semester. The following deliverables are expected:

## 1. Project Proposal and Presentation (Week 4):

- Brief description of the selected system
- Problem statement and objectives
- Justification for system selection
- Stakeholder identification

# 2. Requirement Analysis:

- Functional and non-functional requirements
- Use case diagram and descriptions
- Data flow diagrams (DFD Level 0, 1)

## 3. System Design:

- System architecture
- Entity-Relationship Diagram (ERD)
- Class diagrams (for object-oriented systems)

### 4. User Interface and Prototyping:

- Wireframes/mockups
- User interface considerations
- Basic navigation flow

#### 5. Final Report and Presentation (Week 14):

- Consolidated documentation
- Discussion of challenges and solutions
- Presentation of findings and design decisions

SWE5300 SEMESTER 2 2024/2025

#### **Assessment Criteria:**

Projects will be evaluated based on:

- Completeness and clarity of deliverables (40%)
- Application of analysis and design principles (30%)
- Presentation and documentation quality (20%)
- Innovation and problem-solving approach (10%)

### **Submission Guidelines:**

- Report must be submitted in PDF format.
- Each student must present their work in a 10-minute session.
- Late submissions will result in a penalty unless prior approval is obtained.

## **Collaboration and Academic Integrity:**

Plagiarism and academic dishonesty will not be tolerated. Any copied work will be disqualified.

SWE5300 SEMESTER 2 2024/2025

# **Rubric for Assessment:**

Criteria	Excellent (90-100%)	Good (75-89%)	Satisfactory (60-74%)	Needs Improvement (<60%)
Project Proposal	Clear, well-defined problem, objectives, and stakeholders. Justification is strong.	Mostly clear with minor missing details. Justification is reasonable.	Problem and objectives stated but lack depth. Stakeholders partially identified.	Unclear problem, weak objectives, and missing stakeholder details.
Requirement Analysis	Well-documented functional and non- functional requirements. Use case and DFD are complete and precise.	Mostly complete but lacks minor details. Some diagrams need refinement.	Some missing elements in requirements and diagrams.	Requirements are unclear, and diagrams are incomplete or missing.
System Design	Comprehensive and well-structured design with ERD and class diagrams.	Mostly well- structured but minor inconsistencies.	Some aspects missing or require improvement.	Poorly structured design with missing elements.
User Interface & Prototyping	Well-organized wireframes with clear navigation. UI considerations are detailed.	Good wireframes, but UI considerations need refinement.	Basic wireframes with limited UI considerations.	Poorly structured wireframes, missing key elements.
Final Report & Presentation	Professionally presented with clear documentation. Logical flow and well-supported design decisions.	Clear report and presentation but minor inconsistencies.	Report lacks depth, and presentation is somewhat unclear.	Poorly structured report with unclear presentation.
Innovation & Problem Solving	Demonstrates creativity and effective problem-solving strategies.	Some innovative aspects but could be expanded.	Basic approach with minimal innovation.	