



**East West University**  
**Department of Computer Science and Engineering**  
**Course Outline**  
**Spring 2025**

**Course: CSE347 Information System Analysis and Design**

**Credits and Teaching Scheme**

	Theory	Laboratory	Total
<b>Credits</b>	3	1	4
<b>Contact Hours</b>	5 Hours/Week for 15 Weeks + Final Exam in the 16 <sup>th</sup> Week	4 Hours/Week for 15 Weeks	9 Hours/Week for 15 Weeks + Final Exam in the 16 <sup>th</sup> Week

**Prerequisite**

CSE302 Database Systems

**Instructor Information**

**Instructor:** Md Sabbir Hossain  
Lecturer, Department of Computer Science and Engineering  
**Office:** Room AB3-303  
**Tel. No.:** 09666775577 (hunting) ext.  
**Mobile:**  
**E-mail:** sabbir.hossain@ewubd.edu  
**Course Repository:**

**Class Routine and Office Hour**

Day	8:00-10:00	10:10-11:40	11:50-1:20	1:30-3:00	3:10-4:40	4:50-6:20	6:20-6:50
Sunday		Office Hour	Office Hour	CSE347(5) AB1-201	Office Hour	CSE110 (14) FUB-303	
Monday	CSE200(13) 450	Office Hour	CSE302 Lab(4) 434				
Tuesday					CSE347(6) AB3-602	CSE347(5) LAB 450	
Wednesday						CSE110 (14) FUB-303	Office Hour
Thursday	CSE110(14) LAB 431	Office Hour		CSE347 (5) AB1-201	CSE347(6) AB3-602	CSE347(6) 533	

## Course Objective

This course introduces the knowledge and skills required to analyze and design information system. This course will focus on analysis, design, development, and implementation of information systems. Knowledge of this course will be needed as prerequisite knowledge for future courses such as CSE412: Software Engineering, CSE423: Software Architecture, CSE428: Human Computer Interactions, and CSE430: Software Testing and Quality Assurance.

## Knowledge Profile

**K4 (Forefront engineering specialist knowledge for practice):** Engineering specialist knowledge that provides theoretical frameworks and bodies of knowledge for the accepted practice areas in the engineering discipline; much is at the forefront of the discipline

**K5 (Engineering design):** Knowledge that supports engineering design in a practice area.

**K6 (Engineering practice (technology)):** Knowledge of engineering practice (technology) in the practice areas in the engineering discipline

## Learning Domains

Cognitive - C3: Applying, C4: Analyzing

Psychomotor - P2: Manipulation, P3: Precision

Affective - A2: Responding

## Program Outcomes (POs)

PO1 – Engineering Knowledge

PO3 – Design/Development of Solutions

PO5 – Modern Tool Usage

PO10 – Communication

## Complex Engineering Problem Solution

EP1: Depth of knowledge required

EP2: Range of conflicting requirements

EP3: Depth of analysis required

## Complex Engineering Activities

EA1 – Range of resources

EA2 – Level of interaction

## Course Outcomes (COs) with Mappings

After completion of this course, students will be able to:

CO	CO Description	PO	Learning Domains	Knowledge Profile	Complex Engineering Problem Solving
CO1	<b>Understand</b> the components of information systems, and phases of System Development Life Cycle. <b>Apply</b> project planning and scheduling techniques to effectively manage the design and implementation of information systems. <b>Apply</b> various system analysis techniques to identify and document system requirements, and user needs for developing real-life information systems.	PO1	C3, C4	K4	-
		PO1	C3, C4	K4	-
CO2	<b>Design</b> effective and efficient information systems to address business challenges and requirements. Create system design diagrams, data models, and interface prototypes that guide the development process.	PO3	C4	K5	EP1, EP2, EP3
CO3	<b>Choose</b> and <b>justify</b> appropriate tools for representing analysis and design models, and user interfaces	PO5	P2, P3, C3, C4	K6	EP1, EP2, EP3
CO4	<b>Demonstrate</b> skills, <b>present</b> , and <b>develop</b> concepts, and <b>write</b> reports to design, build, and test information system for complex real-life applications as a team.	PO10	P3, P4, A2, C4	K4, K5	EA1, EA2

### Course Topics, Teaching-Learning Method, and Assessment Scheme

Course Topic	Teaching-Learning Method	CO	CO Levels		Exam (Mark)
			C3	C4	
1. Introduction to Information System Analysis and Design	Lecture, Class Discussion, Discussion	CO1	25	05	Mid Semester Assessment (30)
2. System development life cycle					

(SDLC)	outside class with Instructor/TA				
3. Project Management, Project Selection, Project Scheduling Techniques					
4. Requirement Determination, Analysis and Gathering Requirements					
5. Business Process and Functional Modeling by using Use case Diagram					
Business Process and Functional 5 Modeling:					
6. Activity Diagram					
7. System interactions using Sequence Diagram					
8. Class Diagram	Do	CO2	-	30	Final Exam (30)
9. State machine diagram					
10. Data Flow and Component					
11. Deployment Diagram					
12. User Interface Design					

### Laboratory Experiments and Assessment Scheme

Experiment	Teaching-Learning Method	CO	Mark of Cognitive Learning Levels		Mark of Psychomotor Learning Levels		Mark of Affective Learning Levels	CO Mark
			C3	C4	P2	P3	A2	
Lab Performance	Lab Experiment and Result Analysis and Discussion with Instructor, Post-Lab Report	CO3	2	2	2	2	2	10
Lab Exam	Individual Lab Exam and/or Viva	CO3	1	1	1	1	1	5

### Mini Project

Teaching-Learning Method	CO	Mark of Cognitive Learning Level		Mark of Psychomotor Learning Levels		Mark of Affective Learning Level		CO Mark
		C5	C6	P2	P3	A2	A3	
Group-based, moderately complex project development along with Report, VIVA, and presentation	CO4	2	2	2	2	1	1	10

### Overall Assessment Scheme

Assessment Area	CO				Total
	CO1	CO2	CO3	CO4	
Class Test	05	05	-	-	10
Mid Semester Assessment	30	-	-	-	30
Final Exam	-	30	-	-	30
Laboratory Performance	-	-	10	-	10
Lab Exam	-	-	05	-	05
Assignment	-	-	-	05	05
Mini Project	-	-	-	10	10
<b>Total</b>	<b>35</b>	<b>35</b>	<b>15</b>	<b>15</b>	<b>100</b>

### Teaching Materials/Equipment

#### Reference books:

1. Systems Analysis and Design: An Object-Oriented Approach with UML, By Alan Dennis, Barbara Wixom, David Tegarden
2. Systems Analysis and Design, 5th Edition, By Barbara Haley Wixom, Roberta M. Roth, Alan Dennis
3. Software Engineering: A Practitioner's Approach (8th Edition) by Roger S. Pressman, Bruce Maxim

**Course Materials and Slides:** All course materials and slides will be available in Google classroom. (Everyone is requested to join google classroom).

### Grading System

Marks (%)	Letter Grade	Grade Point	Marks (%)	Letter Grade	Grade Point
80-100	A+	4.00	55-59	B-	2.75
75-79	A	3.75	50-54	C+	2.50

70-74	A-	3.50	45-49	C	2.25
65-69	B+	3.25	40-44	D	2.00
60-64	B	3.00	Below 40	F	0.00

## Academic Code of Conduct

### Academic Integrity:

Any form of cheating, plagiarism, personification, or falsification of a document as well as any other form of dishonest behavior related to obtaining academic gain or the avoidance of evaluative exercises committed by a student is an academic offense under the Academic Code of Conduct and **may lead to severe penalties as decided by the Disciplinary Committee of the university.**

### Special Instructions:

- Students are expected to attend all classes and examinations. A student **MUST** have at least 80% class attendance to sit for the final exam.
- Students will not be allowed to enter the classroom after 20 minutes of the starting time.
- For plagiarism, the grade will automatically become zero for that exam/assignment.
- Normally there will be **NO make-up exam**. However, in case of **severe illness, death of any family member, any family emergency, or any humanitarian ground**, if a student misses any exam, the student **MUST** get approval for a makeup exam by written application to the Chairperson through the Course Instructor **within 48 hours** of the exam time. Proper supporting documents in favor of the reason for missing the exam must be presented with the application.
- For the **final exam**, there will be NO makeup exam. However, in case of **severe illness, death of any family member, any family emergency, or any humanitarian ground**, if a student misses the final exam, the student **MUST** get an approval of **Incomplete Grade** by written application to the Chairperson through the Course Instructor **within 48 hours** of the final exam time. Proper supporting documents in favor of the reason for missing the final exam must be presented with the application. **It is the responsibility of the student to arrange an Incomplete Exam within the deadline mentioned in the Academic Calendar in consultation with the Course Instructor.**
- All mobile phones and smart watches **MUST** be turned to silent mode during class and exam periods. Students cannot carry any Bluetooth device in the exam hall.
- There is **zero tolerance for cheating** in exams. Students caught with cheat sheets in their possession, whether used or not; writing on the palm, back of calculators, chairs, or nearby walls; copying from cheat sheets or other cheat sources; copying from other examinees, etc. would be treated as cheating in the exam hall. The only penalty for cheating is **expulsion for several semesters as decided by the Disciplinary Committee of the university.**

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