EAST WEST UNIVERSITY

Department of Computer Science and Engineering
Course Outline
Summer 2022

Course Information

Course: CSE 347 Information System Analysis and Design (Section 4)
Prerequisites: CSE302 Database Systems

Credits and Teaching Scheme

	Theory	Laboratory	Total
Credit Hours	3	1	4
Contact Hours	3 Hours/Week for 13 Weeks + Final Exam in the 14th week	2 Hours/Week for 13 Weeks	5 Hours/Week for 13 Weeks + Final Exam in the 14th week

Instructor Information

Instructor: Nishat Tasnim Niloy
Lecturer, Department of Computer Science & Engineering
Office: Room-368,
Email: nishat.niloy@ewubd.edu

Class Routine and Office Hour

Day	08:00-10:00	10:10-11:40	11:40-12:10	12:20-1:20	1:30-3:00	3:10-4:40	4:50-6:50
Sun	CSE347 Lab (4) 534 (C. Lab-4)	CSE347 Lab (3) 638 (AI Lab)		**Office Hour**	CSE347 (3) AB1-701	-	-
Mon	-	CSE347 (4) AB3-802	**Office Hour**	**Office Hour**	CSE350 (3) 529 (C. Lab-1)	**Office Hour**	CSE350 Lab 534(C. Lab-4)
Tue	-	-	-	**Office Hour**	**Office Hour**	-	-
Wed	-	CSE347 (4) AB3-802	**Office Hour**	**Office Hour**	CSE350 (3) 529 (C. Lab-1)	-	-
Thu	-	-	-	**Office Hour**	CSE347 (3) AB1-401	-	-

Course Objectives

This course introduces the knowledge and skills required to analyze and design information systems. This course will focus on the analysis, design, development, and implementation of organizational 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

- K5 (Engineering design): Knowledge that supports engineering design in a practice area.
- K7 (Comprehension of engineering in society): Comprehension of the role of engineering in society and identified issues in engineering practice in the discipline: ethics and the engineer's professional responsibility to public safety; the impacts of engineering activity; economic, social, cultural, environmental, and sustainability.

Learning Domains

Cognitive - **C2:** Understanding, **C3:** Applying, **C4:** Analyzing, **C5:** Creating, **C6:** Evaluating
Psychomotor - **P2:** Manipulation, **P3:** Precision
Affective - **A2:** Responding, **A3:** Valuing

Program Outcomes (POs)

PO3: Design/Development of Solutions (Cognitive, Affective)
PO6: The Engineer and Society (Affective, Cognitive)
PO8: Ethics (Affective, Cognitive)
PO9: Individual Work and Teamwork (Psychomotor, Affective)
PO11: Project Management and Finance (Cognitive, Psychomotor)

Complex Engineering Problem Solving

- EP1: Depth of knowledge required
- EP2: Range of conflicting requirements
- EP3: Depth of analysis required
- EP4: Familiarity with issues

Complex Engineering Activities

None

Course Outcomes (COs) with Mappings

After completion of this course students will be able to:

CO	CO Description	PO	Learning Domains	Knowledge Profile	Engineering Activities
CO1	**Apply** system development lifecycle; **Analyze, justify** and **construct** object-oriented software	PO3	C3, C4, C5, C6, P2, P3, A2, A3	K5	EP1, EP2, EP3, EP4

	models for developing real-life software projects.				
CO2	**Prepare** and **analyze** software requirements for developing software projects fulfilling user requirements	PO6	C3, C4	K7	EP1, EP2, EP3, EP4
CO3	**Apply** various feasibility analysis and sampling techniques and **analyze** data for developing software projects fulfilling ethical and user requirements.	PO8	C3, C4	K7	-
CO4	**Use** and **select** appropriate project management techniques for developing software projects.	P11	C3, C4	-	EA1, EA2
CO5	**Demonstrate** skills, present and develop concepts, and write reports to design, build, and test software for complex real-life applications as a team.	PO9	P3 A2, A3	-	-

Course Topics, Teaching-Learning Method, and Assessment Scheme

Course Topic	Teaching-Learning Method	CO	Mark of Cognitive Learning Levels		COMark	Exam (Mark)
			C3	C4		
Introduction to Information System Analysis and Design, System development life cycle (SDLC), Requirements collection, analysis, specification, and modeling fulfilling user requirements **System Planning and Feasibility Analysis, sampling and investigating data fulfilling ethical and user requirements** **Project Management** **Modeling system requirements: Use Case diagram**	Lecture, Class Discussion, Discussion outside class with Instructor/TA	CO1 CO2 CO3	10 5 -	- - 5	10 5 5	**Midterm Exam I (20)**
Modeling system requirements: Activity Diagram, Object-Oriented Design	Do	CO1 CO2	10 -	- 10	10 10	**Midterm Exam II (20)**

Modeling: Sequence Diagram, Class diagram, Data Flow Diagram						
Application architecture and modeling **Component Diagram** **Deployment Diagram, Input-Output design and prototyping** **User Interface design**	Do	CO1 CO2	10 -	- 10	10 10	**Final Exam (20)**

Laboratory Experiments and Mini Project

Experiment	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	
Lab Exercise	Lab Experiment and Result Analysis, Evaluation of Project Progress	CO4	5	2	3	2	3	-	15
Mini Project including Report and Presentation	Group-based, moderately complex Requirement analysis & Design Report, and oral presentation	CO5	2	2	2	1	1	2	10

Overall Assessment Scheme

Assessment Area	CO					Other	Total	PO Marks				
	CO1	CO2	CO3	CO4	CO5			PO3	PO6	PO8	PO9	PO11
Class Participation	-	-	-	-	-	5	5	-	-	-	-	-
Class Test	-	-	-	-	-	10	10	-	-	-	-	-
Midterm-I Exam	10	5	5	-	-	-	20	10	5	5	-	-
Midterm-II Exam	10	10	-	-	-	-	20	10	10	-	-	-
Final Exam	10	10	-	-	-	-	20	10	10	-	-	-
Lab Performance	-	-	-	15	-	-	15	-	-	-	-	15
Mini Project	-	-	-	-	10	-	10	-	-	-	10	-
Total	**30**	**25**	**5**	**15**	**10**	**15**	**100**	**30**	**25**	**5**	**10**	**15**

Teaching Materials

Textbook:

- Sommerville, Ian. Software engineering (9th Edition)
- Software Engineering: A Practitioner's Approach (8th Edition) by Roger S. Pressman, Bruce Maxim

Exam Dates

- **Class test:** The date will be announced later. Among the three tests, the average of the best two will be considered.
- **Midterm-1: 06 July 2022**
- **Midterm-2: 10 August 2022**
- **Final: 14 September 2022**

Grading System

Marks (%)	Letter Grade	Grade Point	Marks (%)	Letter Grade	Grade Point
97-100	A+	4.00	73-76	C+	2.30
90-96	A	4.00	70-72	C	2.00
87-89	A-	3.70	67-69	C-	1.70
83-86	B+	3.30	63-66	D+	1.30
80-82	B	3.00	60-62	D	1.00
77-79	B-	2.70	Below 60	F	0.00

Academic Code of Conduct

Academic Integrity:

Any form of cheating, plagiarism, personification, 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 an 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 have to 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 MUST be turned to silent mode during class and exam periods.
- There is **zero tolerance for cheating** in the exam. 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 another examinee, 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**.
