



Information Systems Department

Course Syllabus

IS309 - System Analysis and Design

Catalog Description: This course introduces the fundamental principles of object-oriented approaches to modeling software requirements and design. It has been designed to integrate theoretical concepts of systems analysis and design with practical examples and case studies so as to teach both the theory and the practice of this subject. Over the last few years, the object-oriented software industry has gone through the process of standardizing visual modeling notations. The Unified Modeling language (UML), a modeling language for specifying, visualizing, constructing, and documenting, is the product of this effort. UML unifies the notations that currently exist in the industry. This course also introduces UML to the students.

Credit Hours: **4 Credit hours:** 4 Lectures per week 0 Labs. per week 0 Recitation per week

Prerequisites: IS320 - Introduction to Database and IS394 - Requirements Engineering

Course Learning Outcomes:

1. Describe the role of analysis and design in Software engineering along with related issues.
2. Design a systems by applying principles and methodology of Object Oriented design.
3. Apply most of the analysis and design techniques at intermediate level.
4. Evaluate analysis and design of an information systems on the basis of different criteria.
5. Function effectively on teams to accomplish a common goal.
6. Present a topic in a compelling manner.

Major Topics:

- Introduction to Systems Analysis & Design
- Business Process and Functional Modeling
- Structural Modeling.
- Behavioral Modeling
- Moving on to Design
- Class and Method Design
- Data Management Layer Design
- Human Computer Interaction Layer Design
- Physical Layer (Architecture)
- Project Discussions



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Text Books: Systems Analysis and Design with UML Version 2.0: An Object-Oriented Approach, 4th edition, Alan Dennis, Barbara Haley Wixom and David Tegarden, John Wiley & Sons, Inc., 2012. ISBN-13: 978-1118037423/ISBN-10: 1118037421

Grading: Ⓞ The grading scale for this course is:

- 95 - 100 A+ Passing
- 90 - 94 A Passing
- 85 - 89 B+ Passing
- 80 - 84 B Passing
- 75 - 79 C+ Passing
- 70 - 74 C Passing
- 65 - 69 D+ Passing
- 60 - 64 D Passing
- 0 - 59 F Failing

Ⓞ Final grades will be determined based on the following components:

- . 60% Semester Work
- . 40% Final Exam

Ⓞ Students may not do any additional work for extra credit nor resubmit any graded activity to raise a final grade.

Ⓞ Late submissions will not be accepted for any graded activity for any reason.

Ⓞ Students have one week to request the re-grading of any semester work.

Attendance Policy: Students should attend 80% of the overall course hours taught in the semester as per the University regulations.

If a student fails to achieve this portion, he/she shall not be allowed to appear in the final exam and shall be awarded “DN” grade and repeat the course.

Cheating and Plagiarism Policy: The instructor will use several manual and automated means to detect cheating and/or plagiarism in any work submitted by students for this course.



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When a student is suspected of cheating or plagiarism, the instructor raises the issue to the disciplinary committee.

Communications: Registered students will be given access to a section of the Learning Management System (LMS) for this course. LMS will be used as the primary mechanism to disseminate course information, including announcements, lecture slides, assignments, and grades.

Communication with the instructor on issues relating to the individual student should be conducted using CIS email, via telephone, or in person.