



Kuwait University
College of Business Administration
Information Systems and Operations
Management Department



Course Syllabus
ISOM 331 System Analysis and Design
Dr. Zainab M. AlQenaei
Spring 2022

Lecture Time and Location:

ISOM 331 / 01A : Sun Tues Thurs 12:00 PM – 12:50 PM Room C2 1020

Contact Information:

Location : ISOM Department – 2nd Floor – Office No. A2 1037
Email : zalbader@mis.cba.edu.kw
Office Phone : (965) 2498 8683
Office Hours : Sun Tue Thu 11:00 AM – 11:50 AM or by email appointment
Social Media : @zmalbader

Teaching Assistant:

Name : TBA
Location : TBA
Email : TBA
Office Hours : TBA

Course Description:

This course is designed to help students learn and apply contemporary systems analysis and design methods, techniques, and tools to augment innovative business information technology (IT) capabilities. It focuses on how IT can effectively and innovatively contribute to the way business is organized. It covers a systematic methodology for analyzing a business problem or opportunity, determining what role, if any, innovative IT can play in addressing the business need, articulating business requirements for the IT solution, specifying alternative approaches to acquiring the IT capabilities needed to address the business requirements, and specifying the requirements for the information systems solution (e.g., in-house development, development from third-party providers, or purchased commercial-off-the-shelf (COTS) packages).

Course Learning Objectives (CLOs):

The learning outcomes for this course, listed below, relate to the learning goals of the College of Business Administration Undergraduate Program. Upon successful completion of the course, students will be able to:

- CLO1.** Recognize and identify business problems/opportunities that are amenable to IT solutions and inventions.
- CLO2.** Initiate, specify, feasibility analyze, and prioritize innovative IT solutions for a business problem or opportunity.
- CLO3.** Appropriately apply methodologies, techniques, and tools (e.g., CASE, Visible Analyst, Visio) to analyze and model business processes and data and identify the requirements and system specifications for the chosen IT solution (i.e., information system)

- CLO4.** Write clear and concise business requirements documents and convert them into technical specifications.
- CLO5.** Communicate effectively with various organizational stakeholders, using a variety of techniques, to collect information and to convey proposed solution characteristics to them. [
- CLO6.** Effectively contribute to information systems projects and practice project management methods and tools (e.g., GANTT, PERT)
- CLO7.** Identify, assess, and make recommends of appropriate information systems service sourcing alternatives (e.g., in-house developed systems, packaged systems, outsourced service).
- CLO8.** Recognize, analyze, and resolve ethical issues involved in the analysis, design, and acquisition of information systems service.

CLO Mapping to CBA Skill Based Competency Goals¹

CLO	Competency Goal				
	Analytical	Communication	Information Technology	Business Ethics	General Business Knowledge
1	R				R
2	A		R		
3	A		I		
4		R			
5		R			
6			I		R
7	A				
8				R	

Type of Emphases:

- **(I)ntroduce:** Students will be introduced to the skill and their grasp of it assessed in the course.
- **(A)pply:** The course will not cover the skill. Students should have a high-level grasp of the skill and are required to apply it in the course.
- **(R)einforce:** Students should have an introductory-level grasp of the skill and the course will improve their mastery to a higher level.

¹ CBA Competency Goals can be found at the end of this document



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Required Material:

- Textbook** : Dennis, A., Wixom, B. H., and Tegarden, D. *Systems Analysis and Design: An Object-Oriented Approach with UML, 5th Edition*. Wiley.
- Additional Material** : Other material is available on Moodle
- E-Learning System** : MS Teams and Moodle Learning Management System
- Course Website** : <https://moodle.ku.edu.kw/login/index.php>

Course Requirements and Policies:

Individual Assignments: There are individual and group assignments. These assignments need to be submitted through Moodle by **9:00 PM** on the due dates. Late submission is not accepted.

In-Class Tests: There are total of three in-class tests. These tests are scheduled on the due dates of the respective chapters. No make-up tests will be given.

Grades: After a grade is posted, you will have one week to discuss your assignment, quiz, presentation, or absence with your instructor or teaching assistant. After that, the grade is final.

Emails: Emails sent must include a subject, be addressed properly, and signed with full name, course and section number. Otherwise, the email will be discarded. Email etiquette could be accessed online on: <http://is.cba.edu.kw/130/email.htm>.

Class Preparation: It is very important that students are prepared for each class period. Check Moodle before each class for the required reading or video.

Nepotism: By registering for this class, you agree to abide by all its regulations including the zero tolerance of nepotism. By agreeing to this rule, you understand that your grade will be decreased a full letter grade (that is: goes from an "A" to a "B" for example) if anyone (family, friends, etc.) attempts to influence your grade (with or without your knowledge).

Attendance and Participation: Every student in this course must abide by the Kuwait University Policy on Attendance (published in the Student Guide, Chapter 3, Section 13). A copy of the student guide can be accessed online on:

http://www.kuniv.edu/cs/groups/ku/documents/ku_content/kuw055940.pdf

Participation will be assessed in each class period. Your class participation and attendance will both contribute to your overall grade. Be on time for the lecture. At the beginning of each lecture, attendance will be taken, anyone coming after that time will be considered as late. Being late three times is equivalent to one absence. Absence with a valid excuse will still count as an absence. Each student is allowed three absences (no questions asked), after that, each absence will result in an automatic deduction of 0.5 points per extra absence from your overall grade.

Cheating and Plagiarism: Every student in this course must abide by the Kuwait University Policy on Cheating and Plagiarism (published in the Student Guide, Chapter 3, Section 2). A copy of the student guide can be accessed online on:

http://www.kuniv.edu/cs/groups/ku/documents/ku_content/kuw055940.pdf



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Please carefully note all sources and assistance when you turn in your work. Under no circumstances should you take credit for work that is not yours. You should neither receive nor give any unauthorized assistance on any deliverable. If you have any questions about what constitutes “unauthorized assistance” please email me before the deliverable is submitted.

Mobiles: Students are expected to turn off notifications at the beginning of each class.

Special Needs: If you are a special needs student (have any disability), please inform your instructor.

Writing Style: Students must refer to APA writing style for their assignments and report writing. Refer to the English Language Unit for help.

Grading:

The scores in this course will be the weighted average of the following items:

Weight	Description
5%	Discussion and Participation
15%	Lab
20%	Project
20%	Tests (three tests drop one; 10% each)
40%	Final Exam
100%	Total

Grade Distribution:

Grade	Range
A	≥ 95
A-	≥ 90 and < 95
B+	≥ 87 and < 90
B	≥ 83 and < 87
B-	≥ 80 and < 83
C+	≥ 77 and < 80
C	≥ 73 and < 77
C-	≥ 70 and < 73
D+	≥ 65 and < 70
D	≥ 60 and < 65
F	< 60

Important Dates:

Date/Time	Event
April 7 th , 2022	Last day to withdraw course
May 26 th , 2022	Last day of classes
June, 7 th 2022 08:00 AM – 10:00 AM	Final Exam

Course Outline:

Week	Chapter	Topics
1	Chapter 1: Introduction to Systems Analysis and Design	CDLC, Development Methodologies, Systems Analyst's Roles and Skills, Object-Oriented Analysis, The Unified Process
2	Chapter 2: Project Management	Project Identification, Feasibility Analysis, Project Selection, Management Workplan, Staffing, Infrastructure
3	Chapter 3: Requirements Determination	Requirements Determination, Requirements Analysis, Requirements Gathering, Requirements Documentation
	Test 1	Chapters 1-3
4	Chapter 4: Business Process and Functional Modeling	Cases and Use Case Diagrams, Process Modeling with Activity Diagrams, Modeling with Use Cases and Use Case Description, Verification and Validation of Processes and Models
5	Chapter 5: Structural Modeling	Structural Models, Object Identification, CRC Cards, Class Diagrams, Creating Structural Models using CRC Cards and Class Diagrams
6	Chapter 6: Behavioral Modeling	Behavioral Models, Interaction Diagrams, Behavioral State Machines, Crude Analysis
	Test 2	Chapters 4-6
7	Chapter 7: Moving on to Design	Evolving the Analysis Models into Design Models, Packaging and Package Diagrams, Design Strategies, Selecting an Acquisition Strategy
8	Chapter 8: Class and Method Design	Revisiting the Basic Characteristics' of OO, Design Criteria, Object Design Activities, Constraints and Contracts, Method Specification
9	Chapter 9: Data Management Layer Design	Object-Persistence Formats, Mapping Problem Domain Objects to Object-Persistence Formats, Optimizing RDBMS-Based Object Storage, Designing Data Access and Manipulation
	Test 3	Chapters 7-9
10	Chapter 10: Human-Computer Interaction Layer Design	User Interface Design Principles, User Interface Design Process, Navigation Design, Input Design, Output Design, Non-Functional Requirements and Human-Computer Interaction Layer Design
11	Final Project	Apply the tools and techniques of object oriented system analysis and design to work through the processes of a new system
12	Final Project	Submission
13	No classes	
14	Final Exam	All Chapters (open book)



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CBA Vision:

To be the leading provider of quality business education in the region.

CBA Mission:

As part of Kuwait University, the leading national institution of higher education, the College of Business Administration is committed to providing quality business education, engaging in research and community services to contribute to the socio-economic development of the country.

CBA Competency Goals

1. Analytical Competency: A CBA graduate will be able to use analytical skills to solve business problems and make a well-supported business decision.

Student Learning Objectives:

- 1.1. Use appropriate analytical techniques to solve a given business problem.
- 1.2. Critically evaluate multiple solutions to a business problem.
- 1.3. Make well-supported business decisions.

2. Communication Competency: A CBA graduate will be able to communicate effectively in a wide variety of business settings.

Student Learning Objectives:

- 2.1. Deliver clear, concise, and audience-centered presentations.
- 2.2. Write clear, concise, and audience-centered business documents.

3. Information Technology Competency: A CBA graduate will be able to utilize Information Technology for the completion of business tasks.

Student Learning Objectives:

- 3.1. Use data-processing tools to analyze or solve business problems.

4. Ethical Competency: A CBA graduate will be able to recognize ethical issues present in business environment, analyze the tradeoffs between different ethical perspectives, and make a well-supported ethical decision.

Student Learning Objectives:

- 4.1. Identify the ethical dimensions of a business decision.
- 4.2. Recognize and analyze the tradeoffs created by application of competing ethical perspectives.
- 4.3. Formulate and defend a well-supported recommendation for the resolution of an ethical issue.

5. General Business Knowledge: A CBA graduate will be able to demonstrate a basic understanding of the main business disciplines' concepts and theories.

Student Learning Objectives:

- 5.1. Acquire a fundamental understanding of knowledge from the main business disciplines (e.g. finance, accounting, marketing, and management information systems, among others).