



Course Specification

(Bachelor)

Course Title: **Systems Analysis and Design**

Course Code: **IS1235**

Program: **Bachelor of Information Systems**

Department: **Information systems**

College: **College of Computer and Information Sciences**

Institution: **Imam Mohammad Ibn Saud Islamic University**

Version: **2**

Last Revision Date: **July 10th, 2025**

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A. General information about the course:

1. Course Identification

1. Credit hours: 3 credit hours (lectures 2, Tutorial 1)

2. Course type

A. ☐ University ☐ College ☒ Department ☐ Track ☐ Others
B. ☒ Required ☐ Elective

3. Level/year at which this course is offered: 2nd Year

4. Course general Description:

This course is intended to give students a solid background in systems analysis and design. They will be examined from two perspectives: 1. as a system user, and 2. as a system analyst and designer. The course will cover the basic skills and capabilities required from a system analyst and will examine the process of designing an information system.

At the end of the course, students are expected to be familiar with the process of analyzing and designing an information system. Particular attention will be paid towards user acceptability as well as the features that are required in a system.

5. Pre-requirements for this course (if any):

IS1130 Requirements Engineering

6. Co-requisites for this course (if any):

No Co-requisites

7. Course Main Objective(s):

The aim of the course is to prepare students familiar with the process, tools and technologies needed to analyze and design an information system.

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	2 hours/week (Lecture) 2 hour/week (Tutorial)	100%
2	Laboratory		





No	Mode of Instruction	Contact Hours	Percentage
3	Hybrid - Traditional classroom - E-learning		
4	Distance learning		

3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	Lectures	30
2.	Laboratory/Studio	
3.	Field	
4.	Tutorial	30
5.	Others (specify)	
Total		60

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	Knowledge and understanding			
1.1	Define and explain information systems analysis and design and SDLC.	K1(I)	Class Lectures	Final, Midterm, Quiz 1
1.2	Comprehend system development methodologies and object-oriented approach to systems analysis and design.	K3(I)	Class Lectures	Midterm
1.3	Describe system implementation concepts with consideration of security, ethical responsibilities, and	K2(I)	Class Lectures	Final





Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
	appropriate development methodologies.			
2.0	Skills			
2.1	Interpret and analyze system requirements to model system functionality, processes, data flow, control mechanisms, and component interactions, considering their impact on individuals and organizations.	S1(P), S3(I)	<i>Class Lectures</i>	<i>Assignment, Quiz 2</i>
2.2	<i>Apply analysis and design techniques at intermediate level on a real-world problem</i> Apply appropriate analysis and design techniques to develop and evaluate computing solutions for real-world problems.	S2(P)	<i>Class Lectures</i>	<i>Final, Assignment, Midterm</i>
...				
3.0	Values, autonomy, and responsibility			
3.1	Function effectively on teams to accomplish a common goal.	V1(I)	Class Discussion, Lecture	<i>Project</i>
3.2	Present a topic in a compelling manner.	V3(I)	Class Discussion, Lecture	<i>Project</i>
...				

C. Course Content

No	List of Topics	Contact Hours
1.	The Systems Development Environment (Ch1)	5
2.	Object-Oriented Analysis and Design- Project Management (Ch3a)	5
3	Structuring System Process Requirements (Ch7)	5





4	Object-oriented analysis and design: use Cases (Ch7a)	5
5	Object-oriented analysis and design: and activity diagram (Ch7b)	5
6	Business process modeling (Ch7d)	5
7	Object-oriented analysis and design: object modelling - Class diagrams (Ch8a)	5
8	Object-oriented analysis and design: sequence diagram (Ch7c)	5
9	Designing Interfaces and Dialogues	5
10	Designing Distributed and Internet Systems	5
11	System Implementation	5
12	Project Presentation	5
Total		60

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Quiz	4,11	10%
2.	Midterm Exam	8	20%
3.	Assignment	6,12	10%
4	Group Project	15	20%
5	Final Exam	16	40%

*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.).

E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	Modern Systems Analysis and Design, Hoffer, George, & Valacich (2020), 9th ed/Global ed. Pearson Education ISBN: 9781292351629
Supportive References	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
Electronic Materials	Imam University's Blackboard will be used for out-of-class-room interaction with the students.
Other Learning Materials	Visual Paradigm Tutorials https://www.visual-paradigm.com/tutorials/

2. Required Facilities and equipment





Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	1. At least 30 seats in laboratory 2. A projector connected to a PC preferably with Internet connection 3. Sliding board
Technology equipment (projector, smart board, software)	StarUML, Microsoft Visio
Other equipment (depending on the nature of the specialty)	N/A

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Students	Indirect using course evaluation survey
Effectiveness of Students assessment	Faculty members	Direct method using TOS file
Quality of learning resources	Students and Faculty	Indirect using course evaluation survey and faculty survey
The extent to which CLOs have been achieved	Faculty members	Direct method using TOS file
Other		

Assessors (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify))

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	IS CURRICULUM APPROVAL & DEVELOPMENT COMMITTEE IS QAC / / IS COUNCIL
REFERENCE NO.	
DATE	

