KINGDOM OF SAUDI ARABIA
IMAM MOHAMMAD IBN SAUD ISLAMIC UNIVERSITY
COLLEGE OF COMPUTER AND INFORMATION SCIENCES
INFORMATION SYSTEMS DEPARTMENT
BACHELOR OF INFORMATION SYSTEMS

المملكة العربية السعودية
جامعة الإمام محمد بـن سعود الإسلامية
كلية علوم الحاسب والمعلومات
قسم نـظم المعلومات
بـكالوريوس نـظم المعلومات

SYLLABUS

IS 335: Systems Analysis and Design

PREREQUISITE	*IS 220*	CREDIT HOURS	3 (2+2)

Instructor: Bashayer A. Al Twaim
Contact information and office hours
Office No: 2A-246 **Office Hours: Sunday [3 hours]: 10:15 am– 01:00 pm,** **Tuesday [3 hours]: 10:15 am– 01:00 pm.** **E-mail: baaltwaim@imamu.edu.sa**

COURSE 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

COURSE LEARNING OUTCOMES (CLOs)		Aligned SOs
1	**Knowledge and Understanding**	
1.1	Define and explain information systems analysis and design and SDLC.	1(P)
1.2	Comprehend system development methodologies and object oriented approach to systems analysis and design.	1(P)
1.3	Describe system implementation concepts	1(I)
2	**Skills :**	
2.1	Analyze an information system to model system functionality, system processes, flow of data and control, and interaction between system components.	1(A)
2.2	Design an information system along with its interfaces based on the	2(P)

	functional, structural and behavioral analysis performed	
2.3	Apply analysis and design techniques at intermediate level on a real-world problem	2(P)
3	**Values:**	
3.1	Function effectively on teams to accomplish a common goal.	5(P)
3.2	Present a topic in a compelling manner.	5(P)

TEACHING Strategies
Lectures Self-study

No	List of Topics	Contact Hours
١	*Introduction to Systems Analysis & Design*	4
٢	*Business Process and Functional Modeling*	8+2
٣	*Structural Modeling.*	8+2
٤	*Behavioral Modeling*	4+2
٥	*Moving on to Design*	4
٦	*Class and Method Design*	4
٧	*Data Management Layer Design*	4
٨	*Human Computer Interaction Layer Design*	4
٩	*Physical Layer (Architecture)*	4+2
١٠	*Project Discussions*	4
Total		48+8(SL)

TEXT BOOK
Dennis, A., Wixom, B., Tegarden, D. (2020). Systems Analysis and Design: An Object-Oriented Approach with UML, 6th Edition. [[VitalSource Bookshelf version]]. Retrieved from vbk://9781119561217

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

Course Assessment Methods			
No	Assessment Method	Due Week	%Total Assessment
1	**Quiz**	4	10
2	**Assignment**	6	10
3	**Midterm**	8	20
4	**Project / Lab Exam**	11	20
5	**Final Exam**	13	40