



Course Specification of Systems analysis and Design (II)

Course No (.....)

2020/2021

Head of Department	Vise Dean for Qulity Assurance	Dean of the Faculty	Dean of Development center and Quality Assurance
Assoc. Prof. Mansour N. Ali	Dr. Anwar Al-Shamiri	Dr. Nagi Al-Shibani	Assoc. Prof. Dr.Huda Al.Emad
Rector of Sana'a University			
Prof. Dr. Qassim Mohammed Abbas			



Course Specification of Systems Analysis and Design II

I. Course Identification and General Information:					
1	Course Title:	Systems analysis and Design (II)			
2	Course Code & Number:				
3	Credit hours:	C.H			
		Th.	Seminar	Pr	Tr.
		2	-	2	-
4	Study level/ semester at which this course is offered:	3 rd Level -2 nd Semester			
5	Pre –requisite (if any):	Systems Analysis and Design I			
6	Co –requisite (if any):	None			
7	Program (s) in which the course is offered:	IS			
8	Language of teaching the course:	English/Arabic			
9	Study System	Term based system			
10	Mode of delivery:	Full Time			
11	Location of teaching the course:	Faculty of Computer and Information Technology			
12	Prepared By:	Dr. Mansour N. Ali			

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13	Date of Approval	
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II. Course Description:
This course covers advanced IS development phases to deliver the final product. Topics covered include the development strategies, systems design phase including user interface design, data design, and system architecture. It also covers the systems implementation phase including application development, installation, and evaluation. The last phase covered is systems support and security, tasks that continue throughout the useful life of the system.

III. Course Intended learning outcomes (CILOs) of the course		Referenced PILOs (Only write code number of referenced Program Intended learning outcomes)
a.1	Explain software acquisition alternatives, and software outsourcing options.	A1, A2
a.2	Describe user interface design, data design, and systems architecture design.	A1, A3
a.3	Describe application development, documentation, and evaluation.	A1, A3, A4
b.1	Analyze techniques for transitioning to a new information system.	B1, B3
b.2	Develop training plans for various user groups, and assess system security.	B2, B4
c.1	Construct the physical model of the information system.	C2

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c.2	Implement information technology solutions that enhance organizational performance.	C3
d.1	Communicate effectively with users, stakeholders, and project team during system development.	D2
d.2	Collaborate with other professionals as well as perform successfully at the individual level during system development.	D1

(A) Alignment Course Intended Learning Outcomes of Knowledge and Understanding to Teaching Strategies and Assessment Strategies:

Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
a1- Explain software acquisition alternatives, and software outsourcing options.	–Lecture and presentation –Dialogue and discussion. –Self and cooperative learning –Brainstorming. –Problem Solving.	– Quizzes – Homework Assessment – Midterm Exam – Final Exam – Project Assessment
a2- Describe user interface design, data design, and systems architecture design.		
a3- Describe application development, documentation, and evaluation.		

(B) Alignment Course Intended Learning Outcomes of Intellectual Skills to Teaching Strategies and Assessment Strategies:

Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
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b1- Analyze techniques for transitioning to a new information system.	– Lecture and presentation – Dialogue and discussion – Self and cooperative learning – Brainstorming. – Problem Solving.	– Quizzes – Homework Assessment – Midterm Exam – Final Exam
b2- Develop training plans for various user groups, and assess system security.		

(C) Alignment Course Intended Learning Outcomes of Professional and Practical Skills to Teaching Strategies and Assessment Strategies:

Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
c1- Construct the physical model of the information system.	– Lecture and presentation – Discussion – Self and cooperative learning. – Brainstorming. – Problem Solving. – Project	– Quizzes – Performance observation. – Midterm Exam – Final Exam – Project Assessment – Report Assessment
c2- Implement information technology solutions that enhance organizational performance.		

(D) Alignment Course Intended Learning Outcomes of Transferable Skills to Teaching Strategies and Assessment Strategies:

Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
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d1- Communicate effectively with users, stakeholders, and project team during system development.	– Discussion – Self and cooperative learning – Project	– Performance observation. – Project and report assessment
d2- Collaborate with other professionals as well as perform successfully at the individual level during system development.		

IV. Course Content:					
A – Theoretical Aspect:					
Order	Units/Topics List	Learning Outcomes	Sub Topics List	Number of Weeks	contact hours
1	Development Strategies	a1,b1,b2,d1	<ul style="list-style-type: none"> Introduction Development Strategies Overview The Impact of the Internet Outsourcing In-House Software Development Options The Systems Analyst's Role Analyzing Cost and Benefits The Software Acquisition Process Completion of Systems Analysis Tasks Transition to Systems Design 	2w	6

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2	User Interface Design	a2,c1,c2,d1,d2	<ul style="list-style-type: none"> Systems Design Phase Overview What Is a User Interface? Seven Habits of Successful Interface Designers Guidelines for User Interface Design Source Document and Form Design Printed Output Technology Issues Security and Control Issues 	2w	6
3	Data Design	a2,b2,c1,c2,d1,d2	<ul style="list-style-type: none"> Data Design Concepts DBMS Components Web-Based Design Data Design Terms Entity-Relationship Diagrams Data Normalization Using Codes Data Storage and Access Data Control 	2w	6
4	System Architecture	a2,b2,c1,c2,d1,d2	<ul style="list-style-type: none"> Introduction Architecture Checklist System Architecture: Then and Now Client/Server Designs The Impact of the Internet Ecommerce Architecture Processing Methods Network Models Wireless Networks Systems Design Completion 	2w	6

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5	Managing Systems Implementation	a1,a3,b1,b2,c2,d1,d2	<ul style="list-style-type: none"> ▪ Introduction ▪ Software Quality Assurance ▪ Overview of Application Development ▪ Structured Application Development ▪ Object-Oriented Application Development ▪ Agile Application Development ▪ Coding ▪ Testing the System ▪ Documentation ▪ Management Approval ▪ System Installation and Evaluation ▪ Operational and Test Environments ▪ Training ▪ Data Conversion ▪ System Changeover ▪ Post-Implementation Tasks 	2w	6
6	Managing Systems Support and Security	a1,b2,c2,d1,d2	<ul style="list-style-type: none"> ▪ Introduction ▪ User Support ▪ Maintenance Tasks ▪ Maintenance Management ▪ System Performance Management ▪ System Security Overview ▪ Security Levels ▪ Backup and Recovery ▪ System Obsolescence 	2w	6

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			Future Challenges and Opportunities		
7	Project presentation and discussions	All		2w	6
Number of Weeks /and Units Per Semester				14w	42

B - Practical Aspect: (if any)

Order	Tasks/ Experiments	Number of Weeks	contact hours	Learning Outcomes
1				
Number of Weeks /and Units Per Semester				

V. Teaching strategies of the course:

- Lectures
- Discussion
- Brainstorming
- Problem solving
- Projects
- Self-learning
- Cooperative learning

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VI. Assignments:

No	Assignments	Aligned CILOs (symbols)	Week Due	Mark
1	Project	All	2 nd -12 th	10
2	Homework	a1, a2,a3, b1, b2,d1,d2	6 th , 12 th	6

VII. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	Homework /Projects	2 nd -12 th	16	16%	All
2	Quiz	4 th	4	4%	a1, a2,c1,c2, d2
3	Midterm Exam	7 th	20	20%	a1, a2,c1,c2, d2
4	Final Exam	16 th	60	60%	a1, a2, a3, b1, b2,c1,c2,d2

VIII. Learning Resources:

- Written in the following order: (Author - Year of publication – Title – Edition – Place of publication – Publisher).

1- Required Textbook(s) (maximum two).

1. Scott Tilley and Harry Rosenblatt, 2017, Systems Analysis and Design, Eleventh Edition, USA, Cengage Learning.

Head of Department

Vise Dean for Qulity Assurance

Dean of the Faculty

Dean of Development center and Quality Assurance

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2- Essential References.	
	1- Kendall & Kendall, 2014, Systems Analysis and Design, 9 th edition, USA, Pearson. 2- Alan Dennis, Barbara Haley Wixom, David Tegarden, Elaine Seeman, 2015, Systems analysis & design: an object-oriented approach with UML, Fifth edition, USA, Wiley.
3- Electronic Materials and Web Sites etc.	
	1- https://www.visual-paradigm.com/features/uml-tool/ 2- https://www.omg.org/training/index.htm

IX. Course Policies:	
Unless otherwise stated, the normal course administration policies and rules of the Faculty of Computer and Information Technology apply. For the policy, see: ----- -- The University Regulations on academic misconduct will be strictly enforced. Please refer to ----- ----	
1	Class Attendance: A student should attend not less than 75 % of total hours of the subject; otherwise he will not be able to take the exam and will be considered as exam failure. If the student is absent due to illness, he/she should bring a proof statement from university Clinic
2	Tardy: For late in attending the class, the student will be initially notified. If he repeated lateness in attending class, he will be considered as absent.
3	Exam Attendance/Punctuality: A student should attend the exam on time. He is Permitted to attend an exam half one hour from exam beginning, after that he/she will not be permitted to take the exam and he/she will be considered as absent in exam.
4	Assignments & Project The assignment is given to the students after each chapter; the student has to submit all the assignments for checking on time.
5	Cheating:

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	For cheating in exam, a student will be considered as fail. In case the cheating is repeated three times during his/her study the student will be disengaged from the Faculty.
6	Plagiarism: Plagiarism is the attending of a student the exam of a course instead of another student. If the examination committee proofed a plagiarism of a student, he will be disengaged from the Faculty. The final disengagement of the student from the Faculty should be confirmed from the Student Council Affair of the university.
7	Other policies: <ul style="list-style-type: none"> - Mobile phones are not allowed to use during a class lecture. It must be closed, otherwise the student will be asked to leave the lecture room - Mobile phones are not allowed in class during the examination. - Lecture notes and assignments my given directly to students using soft or hard copy

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Faculty of Computer & Information Technology

Department of Information System

Program of Information System

Course syllabus of Systems analysis and Design (II)

Course No (.....)

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2020/2021

Template for Course Plan (Syllabus)

I. - Information about Faculty Member Responsible for the Course:							
Name of Faculty Member		Office Hours					
Location & Telephone No.		SAT	SUN	MON	TUE	WED	THU
E-mail							

II. Course Identification and General Information:						
1	Course Title:	Systems Analysis and Design II				
2	Course Code & Number:					
3	Credit hours:	C.H				TOTAL
		Th.	Seminar	Pr	Tr.	
		3	-	-	-	3
4	Study level/ semester at which this course is offered:	3 rd Level -2 nd Semester				
5	Pre –requisite (if any):	Systems Analysis and Design I				
6	Co –requisite (if any):	None				

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7	Program (s) in which the course is offered:	IS
8	Language of teaching the course:	English/Arabic
9	Study System	Term based system
10	Mode of delivery:	Full Time
11	Location of teaching the course:	Faculty of Computer and Information Technology

III. Course Description:

This course covers advanced IS development phases to deliver the final product. Topics covered include the development strategies, systems design phase including user interface design, data design, and system architecture. It also covers the systems implementation phase including application development, installation, and evaluation. The last phase covered is systems support and security, tasks that continue throughout the useful life of the system.

IV. Intended learning outcomes (ILOs) of the course:

- Brief summary of the knowledge or skill the course is intended to develop:

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- a.1- Explain software acquisition alternatives, and software outsourcing options.
- a.2- Describe user interface design, data design, and systems architecture design.
- a.3- Describe application development, documentation, and evaluation.
- b.1- Analyze techniques for transitioning to a new information system.
- b.2- Develop training plans for various user groups, and assess system security.
- c.1- Construct the physical model of the information system.
- c.2- Implement information technology solutions that enhance organizational performance.
- d.1- Communicate effectively with users, stakeholders, and project team during system development.
- d.2- Collaborate with other professionals as well as perform successfully at the individual level during system development.

V. Course Content:

- Distribution of Semester Weekly Plan of Course Topics/Items and Activities.

A – Theoretical Aspect:

Order	Topics List	Week Due	Contact Hours
1	Development Strategies	1 st -2 nd	6
2	User Interface Design	3 rd -4 th	6

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3	Data Design	5 th -6 th	6
4	Midterm Exam	7 th	2
5	System Architecture	8 th -9 th	6
6	Managing Systems Implementation	10 th -11 th	6
7	Managing Systems Support and Security	12 th -13 th	6
8	Project presentation and discussions	14 th -15 th	6
9	Final Exam	16 th	2
Number of Weeks /and Units Per Semester		16	46

B – Practical Aspect: (if any)			
Order	Topics List	Week Due	Contact Hours
1			
Number of Weeks /and Units Per Semester			

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1	Project	All	2 nd -12 th	10
2	Homework	a1, a2,a3, b1, b2,d1,d2	6 th , 12 th	6

VIII. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment
1	Homework/Projects	2 nd -12 th	16	16%
2	Quiz	4 th	4	4%
3	Midterm Exam	7 th	20	20%

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4	Final Exam	16 th	60	60%
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	1- https://www.visual-paradigm.com/features/uml-tool/ 2- https://www.omg.org/training/index.htm

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اللجنة الإشرافية			
م.	الاسم	الصفة	التوقيع
١	أ.م.د. عبد الماجد الخليدي	نائب عميد الكلية للشؤون الأكاديمية	
٢	أ.م.د. احمد مجاهد	نائب عميد مركز التطوير الأكاديمي وضمان الجودة	
٣	د. حسين الأشول	ممثل المركز في الكلية	
٤	أ.د. إبراهيم المطاع	نائب رئيس الجامعة للشؤون الأكاديمية	

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