



Course Specification

Course Name: [Analysis and Design of Information System - 2]

Course Code: IS352

I. Basic Course Information

Major or minor element of program: [Major & Minor]

Department offering the course: [Information Systems Department]

Academic level: [400 Level]

Semester in which course is offered: [Second (spring) Semester]

Course pre-requisite(s): [IS351 Analysis and Design of Information System - 1]

Credit Hours: 3

Contact Hours Through:

Lecture	Tutorial *	Practical *	Total
2.5	0.0	1.5	4.0

* 1.5 hours for **either** Tutorial or Practical

Approval date of course specification: [January 2015]

II. Overall Aims of Course

[This course aims to help the student develop a solid understanding of the nature of information systems design, the role of modelling and using two major information systems perspectives in design, and to develop competent design-oriented DFD and process design skills.]

III. Program ILOs covered by course

Program Intended Learning Outcomes (By Code)			
Knowledge & Understanding	Intellectual Skills	Professional Skills	General Skills
[K11,K18,K21]	[I6,I14,I15,I17]	[P10,P14,P19,P20]	[G1,G2,G9]



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IV. Intended Learning Outcomes of Course (ILOs)

a. Knowledge and Understanding

On completing the course, students should be able to:

- K.1 **Error! Not a valid bookmark self-reference.**
- K.2 Describe the basics of input and output design.
- K.3 **Error! Not a valid bookmark self-reference.**user interface design.
- K.4 State the basics of database design.
- K.5 Define Business Process Modelling & Notation.]

b. Intellectual/Cognitive Skills

On completing the course, students should be able to:

- I.1 [Assess data storage requirements.
- I.2 Devise input/output procedures.
- I.3 Plan systems deployment.
- I.4 Construct comprehensive system models.]

c. Practical/Professional Skills

On completing the course, students should be able to:

- P.1 [Prepare data flow diagrams.
- P.2 Select appropriate input/output methods.
- P.3 Sketch user interface.
- P.4 Practice developing BPMN models.
- P.5 **Error! Not a valid bookmark self-reference..**]

d. General and Transferable Skills

On completing the course, students should be able to:

- G.1 **Error! Not a valid bookmark self-reference..**
- G.2 Self-learn new computer tools.
- G.3 Form a team and work within a team.]

V. Course Matrix Contents

	Main Topics / Chapters	Duration (Weeks)	Course ILOs Covered by Topic (By ILO Code)			
			K & U	I.S.	P.S.	G.S.
1-	[Introduction to systems design]	[1]	[K1]	[]	[]	[]
2-	[Application Architecture]	[1]	[K4]	[I1, I4]	[P1]	[]
3-	[Physical DFD]	[1]	[K4]	[I1, I4]	[P1]	[]
4-	[Procurement options & contracting]	[1]	[K2]	[I2]	[P2]	[G1]
5-	[Output & input design and guidelines]	[1]	[K2]	[I2]	[P2]	[G1]
6-	[Systems implementation & support]	[1]	[K1]	[I3]	[P5]	[G1]
7-	[Case Studies]	[1]	[K1, K2, K3, K4]	[I1,I2,I3,I4]	[P1,P2,P3]	[G1]
8-	Performance Engineering	[1]	[K5]	[I4]	[P4, P5]	[G1, G2]
9-	[Workflow engines & SOA]	[1]	[K5]	[I4]	[P4, P5]	[G1, G2]
10-	[BPEL4WS]	[1]	[K5]	[I4]	[P4, P5]	[G1, G2]
11-	[Mapping of BPMN to BPEL]	[0.5]	[K5]	[I4]	[P4, P5]	[G1, G2]



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13-	[Organizational and technical aspects of process execution]	[0.5]	[K5]	[I4]	[P4, P5]	[G1, G2]
14-	[Business Process Modelling & Notations]	[1]	[K5]	[I4]	[P4, P5]	[G1, G2]
15-	[Post execution analysis and KPIs]	[1]	[K5]	[I4]	[P4, P5]	[G1, G2]
Net Teaching Weeks		13				

VI. Course Weekly Detailed Topics / hours / ILOs

Week No.	Sub-Topics	Total Hours	Contact Hours	
			Theoretical Hours	Practical Hours *
1	Introduction to systems design	2.5	2.5	
2	Application Architecture	4	2.5	1.5
3	Physical DFD Error! Bookmark not defined.	4	2.5	1.5
4	Procurement options & contracting	4	2.5	1.5
5	Output & input design and guidelines	4	2.5	1.5
6	Systems implementation & support	4	2.5	1.5
7	Midterm Exam			
8	Case Studies	4	2.5	1.5
9	Performance Engineering	4	2.5	1.5
10	Workflow engines & SOA	4	2.5	1.5
11	BPEL4WS	4	2.5	1.5
12	Mapping of BPMN to BPEL & organizational and technical aspects of process execution	4	2.5	1.5
13	Business Process Modelling & Notations	4	2.5	1.5
14	Post execution analysis and KPIs	4	2.5	1.5
15	Final Exam			
Total Teaching Hours		51	33	18

* No Practical/Tutorial during the first week of the semester

VII. Teaching and Learning Methods

Teaching/Learning Method	Selected Method	Course ILOs Covered by Method (By ILO Code)			
		K & U	Intellectual Skills	Professional Skills	General Skills
Lectures & Seminars	✓	[All]	[All]	[]	[G1]
Tutorials	[]	[]	[]	[]	[]
Computer lab Sessions	✓	[]	[All]	[All]	[G1]
Practical lab Work	[]	[]	[]	[]	[]
Reading Materials	[]	[]	[]	[]	[]
Web-site Searches	[]	[]	[]	[]	[]
Research & Reporting	✓	[]	[]	[]	[G2, G3]
Problem Solving /	[]	[]	[]	[]	[]



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Problem-based Learning					
Projects	[✓]	[]	[All]	[All]	[All]
Independent Work	[]	[]	[]	[]	[]
Group Work	[]	[]	[]	[]	[]
Case Studies	[✓]	[]	[]	[All]	[All]
Presentations	[]	[]	[]	[]	[]
Simulation Analysis	[]	[]	[]	[]	[]
Others (Specify):	[]	[]	[]	[]	[]

VIII. Assessment Methods, Schedule and Grade Distribution

Assessment Method	Selected Method	Course ILOs Covered by Method (By ILO Code)				Assessment Weight / Percentage	Week No.
		K & U	I.S.	P.S.	G.S.		
Midterm Exam	[✓]	[All]	[All]	[]	[]	[10%]	7
Final Exam	[✓]	[All]	[All]	[]	[]	60%	15
Quizzes	[]	[]	[]	[]	[]	[]	[]
Course Work	[]	[]	[]	[]	[]	[]	[]
Report Writing	[✓]	[]	[]	[]	[G2,G3]	[10%]	[11]
Case Study Analysis	[]	[]	[]	[]	[]	[]	[]
Oral Presentations	[]	[]	[]	[]	[]	[]	[]
Practical	[]	[]	[]	[]	[]	[]	[]
Group Project	[✓]	[]	[All]	[All]	[All]	[20%]	[7, 12, 14]
Individual Project	[]	[]	[]	[]	[All]	[]	[]
Others (Specify):	[]	[]	[]	[]	[]	[]	[]

IX. List of References

Essential Text Books	<ul style="list-style-type: none"> [System Analysis & Design, L. Whitten, D. Bentley, Kevin Dittman, McGraw-Hill, 6th Edition, 2007.]
Course notes	<ul style="list-style-type: none"> [None]
Recommended books	<ul style="list-style-type: none"> [None]
Periodicals, Web sites, etc ...	<ul style="list-style-type: none"> [Some websites relevant to the course topics]

X. Facilities required for teaching and learning

List the facilities required	<ul style="list-style-type: none"> CASE tool, such as Oracle Designer and Power Designer
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Course coordinator: [Dr. Sherif Mazen and Dr. Ahmed Hany]

Head of Department: [Ass. Prof. Ehab Ezza]

Date: January 2015