Course Specification
(2201 System Analysis)

Faculty:	*HICIT- **Higher Institute for Computers & Information Technology**-El Shorouk Academy*
Programme(s) on which the course is given:	Under graduate program in Computer Science
Major or minor element of programme:	Compulsory
Department offering the programme	Department of Computer Science
Department offering the course:	Department of Computer Science
Year / Class	2nd Year – 2nd semester
Date of specification approval	1/8/2022

A- Basic Information

Title: System Analysis	*Code: 2201*		
Weekly Hours:			
Lecture : 3	**Exercise: -**	**Practical :3**	**Total: 6**

B- Professional Information

1- Course Aims:

The objective of CS2201 is to give the student the knowledge and practice of how to study and analyze a new information system or an already existing business system, to detect weaknesses, evolve its performance and functionalities, or to add a new functionality, how to conduct the data and information gathering techniques, how to model an existing and a proposed system and prepare its meta data.

After completing this course, the student should be able to conduct system analysis phases, conduct data gathering techniques, build system models, detect system bottlenecks and propose solutions.

2- Program ILOs Covered by Course

Program Intended Learning Outcomes			
Knowledge and understanding	**Intellectual Skills**	**Professional and practical skills**	**General and Transferable skills**
A3, A11, A13, A15, A17, A21, A22	**B1, B4, B6, B7, B14, B17**	**C5, C6, C9, C13, C15, C19**	**D1, D2, D5, D9, D10, D12**

3- Intended learning outcomes of course (ILOs)
a- Knowledge and under-standing:
a1. Identify the definition of a system, the description of its components, the various types of information systems, and the development life cycle.[A13,A17,A3]

a2. Explain system analysis phases, fact finding techniques, system modeling techniques[A21,A15]

a3. Describe the results of the system analysis process[A11,A13,A22]

b- Intellectual skills
b1. Think over existing weaknesses/difficulties in the current system, tending to be solved.[B1]

b2. Think over the overall system components and to propose new system that overcomes existing weaknesses.[B4,B6,B7]

b3. Evaluate various system alternatives and prioritize the different system alternatives.[B14,B17]

c- Professional and practical skills
c1. Propose new business systems and their new components.[C5, C6]
c2. Gather data from system owners and system users.[C9, C13]
c3. Model an existing and proposed system.[C15, C19]

d- General and transferable skills
d1. Communicate with system owners to gather the required information.[D1,D5,D9]
d2. Work with a team to design a system and write technical report [D2,D10,D12]
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4- Contents

Topic	Hours	Lec.	Exc/Lab
Introduction to system analysis.	12	6	6
Information systems development.	12	6	6
System analysis phases.	12	6	6
Fact finding techniques.	12	6	6
System modeling techniques	12	6	6
system analysis documentation	9	4	6
Selected Topics	3	2	-
Course project	6	3	3

5- Teaching and learning methods

Teaching and learning methods	Used
Active Learning	
Lectures(blending learning – online learning using virtual classroom)	√
Tutorial Exercises (hybrid learning – online learning)	√
Practical Lab(blending learning– online learning)	-
Exercises	
Discussions.	√
Self – Learning strategy	
Reading material	√
Websites search	-
Research and reporting	√
Self-studies	√
Experimental strategy	
Group work	√
Presentation	√
Problem solving strategy	
Problem solving/problem solving learning based	-
Case study	√
Synchronous E-Learning	

Virtual lab	-
Virtual class	-
Chat Room	-
Video lectures	-
Asynchronous E-Learning	
E-Learning	√

6- Student assessment methods

Methods	Assessment	Used
Electronic Midterm Exam	To assess the knowledge and understanding achieved by the student during the previous weeks. (online on e-learning hub)	√
Pencil-to-Paper Final Exam	To evaluate what the student gain at the end of the course, and to assess: the knowledge and understanding, general skills, and intellectual skills.	√
Course Project	To allow students work in team, and to evaluate knowledge, understanding, intellectual, and transferable skills. (online on e-learning hub , FTF)	√
Electronic Course Work & Quizzes	To keep the student always in the course, and to evaluate knowledge, understanding, intellectual, and transferable skills.(online on e-learning hub)	√
Practical Exam	to measure the ability of students to design and implement a software program(FTF).	-
Partipation	To assess the knowledge and understanding achieved by the student during the previous weeks.	√

Assessment Schedule

Assessment	Week #
Participation	3-14
Electronic Mid Term Exam	8
Final Exam	16
Electronic/ hard copy Course Project	3-14
Electronic/ hard copy Course Work &Quizzes	2-14
Practical Exam	-

Assessment Weight

Assessment	Weight %
Participation	5%
Electronic Mid Term Exam	
Final Exam	80%
Electronic / hard copy Course Project	10%

Electronic/ hard copy Course Work &Quizzes	**5%**
Practical Exam	**-**
Total	**100**

 – Course Work &Quizzes:
   o Short Exams, Assignments, Researches, Reports, Presentations on e-learning hub
   o Class/Project discussion in a virtual classroom

6 -List of references
6.1 -Essential books (text books)

Essential books (text books)	– **Kendall, K. E., & Kendall, J. E. (2004, March 1).** *Systems Analysis and Design***. Prentice Hall. https://doi.org/10.1604/9780131454552** – Gornale, S. S., & Basavanna, M. (2017, February 2). *System Analysis and Design: Technology and Applications*.
Recommended books	– Daniels, A., & Yeates, D. (1990, January 1). *Design and Analysis of Software Systems*. https://doi.org/10.1604/9780894332128 – Valacich, J., George, J., & Hoffer, J. (2020, September 15). *Modern Systems Analysis and Design*.
Periodicals,website	**Powerpoint presentations of all course materials** **All labs material** **[https://moodle.sha.edu.eg/course/view.php?id=2252]**

7- Required Facilities
To assess professional and practical skills given the following facilities:
a. Tools & SW (Technologies facilities):
   – **MS Project SW Package for scheduling projects**
   – **MS Power Point SW Package for presentation**
   – **MS Visio SW Package to build the Data flow diagrams**
   – **MS Access database SW Package to practice building and documenting ERD**
   – **MS Word SW Package for system documentation preparation**
   – **Microsoft TEAMS to create virtual classrooms for lectures, discussions for project**
   – **portal(MOODLE) to make electronic quizzes and electronic midterm exam**
   – **academy portal(MOODLE) to upload electronic material**
b. Teaching facilities:

	Lecture	class	Lab
Whiteboard	used	-	Used
Pc/laptop	used	-	Used
Data show	used	-	Used

	Lecture	*class*	*Lab*
Webinars	-	-	-
SocialMedia	Facebook Page for 2nd year	-	Facebook Page for 2nd year
ChatRoom	ChatTeams	-	-
Videos	MOODLE	-	-
Website	MOODLE	-	MOODLE

8-Course Matrices
8.1-Course Content/ILO Matrix

Course Contents	Knowledge & understanding				Intellectual skills				Professional and practical skills				General				
	a1	a2	a3	a4	b1	b2	b3	b4	c1	c2	c3	c4	d1	d2	d3	d4	d5
Introduction to system analysis.	X																
Information systems development.	X																
System analysis phases.		X			X	X	X		X								
Fact finding techniques.		X								X							
System modeling techniques		X									X						
system analysis documentation			X														
Selected Topics									X	X	X	X	X	X	X	X	X
Course project													X	X			

8.2-Learning Method /ILO Matrix

Learning Methods	Knowledge and understanding				Intellectual skills				Professional and practical skills				General			
	a1	a2	a3	a4	b1	b2	b3	b4	c1	c2	c3	c4	d1	d2	d3	d4
Lectures	X	X	X		X	X	X		X	X	X					
Tutorial Exercises					X	X	X		X	X	X					
Reading material	X	X	X		X	X	X		X	X	X					
Websites search	X	X	X		X	X	X			X			X	X		
Research and reporting	X	X	X										X	X		
Problem solving/problem solving learning based							X									
Group work									X	X	X		X	X	X	
Presentations																
Practical Lab																
Discussions.					X	X	X		X	X	X		X	X		

8.3-Assessment Methods /ILO Matrix

Assessment Methods	Knowledge & understanding				Intellectual skills				Professional & practical skills				General				
	a1	a2	a3	a4	b1	b2	b3	b4	c1	c2	c3	c4	d1	d2	d3	d4	d5
Electronic Mid Term Exam	x	x	x		x	x	x		x	x	x						
Final Exam	x	x	x		x	x	x		x	x	x						
Electronic Course Project	x	x	x		x	x	x		x	x	x		x	x			
Electronic Course Work &Quizzes	x	x	x		x	x	x		x	x	x		x	x			

9. Course ILOs Vs Program ILOs

Prog ILOs / Course ILOs	Knowledge & understanding							Intellectual skills						Professional and practical skills						General					
	A3	A11	A13	A15	A17	A21	A22	B1	B4	B6	B7	B14	B17	C5	C6	C9	C13	C15	C19	D1	D2	D5	D9	D10	D12
K&U a1	√		√		√																				
a2				√		√																			
a3		√	√				√																		
a4																									
Int. b1								√																	
b2									√	√	√														
b3												√	√												
b4																									
P. &P. c1														√	√										
c2																√	√								
c3																		√	√						
c4																									
General d1																				√		√	√		
d2																					√			√	√
d3																									
d4																									
d5																									

Course Coordinator: Dr. Magdy elhenawy (   )
Head of Department: Dr. Ahmed El-Abbassy (   )
Date: 1/8/2022