

Department of Computer Science

College of Science

University Of Salahaddin

Subject: System Analysis and Design

Course Book – (Year 2) (Semester 2)

Lecturer's name: - Hero Muhamad Sulaiman

Academic Year: 2023/2024

Course Book

1. Course name	System Analysis and Design
2. Lecturer in charge	Hero Muhamad Sulaiman
3. Department/ College	Computer/College Of Science

4. Contact	e-mail: hero.sulaiman@su.edu.krd
5. Time (in hours) per week	Theory: 4 hours per week
6. Office hours	Office hours (for students): Tuesday (12:00-12:30) Wednesday (12 - 12:30) Thursday(8:00 - 01:00)
7. Course code	SCT205
8. Teacher's academic profile	<p>Teaching:</p> <ul style="list-style-type: none"> - Attended OOP labs in 2011 as a teaching assistant - Attended Compiler labs in 2009 as a teaching assistant - Attended Programming Language labs in 2009 as a teaching assistant - Attended Image Processing labs in 2010 as a teaching assistant - Attended Networking labs in 2011 as a teaching assistant - Attended logic Labs in 2014 - Teaching System Analysis and Design lab 2015-2016 - Attend Web Programming and Design lab 2015-2016. - Attended E-Business Labs in 2015. - Attend Web Programming and Design lab 2015-2016 - Teaching Web Programming and Design lab 2017-2018 - Attend network fundamental lab for third stage 2020-2021 <p>Research interest: My research interest is in Semantic Web</p> <p>Supervision:</p> <p>Past Projects:</p> <ol style="list-style-type: none"> 1. My MSc project was on “Web 2 based interface for recording Ontology within culture and heritage domain” 2. Lecturer-Student Forum and Question Bank 3. Online water billing system 4. College of science attendance system using QR code 5. Volunteering Work Experience Website for Undergraduate Students. 6. Car Service Tracking Online System.

	<p>7. Online Internship Portal for Undergraduate Students.</p> <p>8. Enterprise information system</p> <p>9. Kurdish Online Ordering Website</p> <p>10. 10.Kurdish Shipping Mobile Application</p>
<p>9. Keywords</p>	<p>Business value, Business requirement, project sponsor, system management, requirement determination, business need, stakeholders, company, system design, business process automation, root cause analysis, problem analysis.</p>
<p>10. Course overview:</p> <p>This module (SCT205) introduces System Analysis and Design. It is an active field in which help system analyst to learn new techniques for building the system more efficiently.</p> <p>SAD is used to organize and solve a problem in a company or organisation. It is an important module because it helps users to understand what human needs to analyze input, process, transform, store data and output information in the context of a particular business.</p> <p>Designing the system is a complex process in terms of both time and money. Therefore, developers must be skilled and the aim of this course is to provide the students with these skills which they will need after they graduate.</p>	
<p>11. Course objective:</p> <ul style="list-style-type: none"> • Provides a basic understanding of system characteristics, system design, and its development processes. • Seeks to understand what humans need to analyze data input or data flow systematically. • Use appropriate methods and techniques to produce an analysis of a given scenario. • Evaluate the tools and techniques of systems analysis and design that may be used in a given context. • Describe different life cycle models and explain the contribution of the system analysis and design within them. • Discuss various approaches to systems analysis and design and explain their strengths and weaknesses. • Provide suitable documentation for systems analysis and design activities. 	
<p>12. Student's obligation .</p>	

-There will also be weekly class tests to encourage students to more study.

13. Forms of teaching

-Using power point and data show.

-Using White board.

- Delivering the PPT slides to the students before giving the lecture.

- Interaction with the students inside the classroom.

14. Assessment scheme

Assessment

Coursework (% 40)

-Second Semester

- Exam % 20

- Quiz & Daily Activities % 10

-Homework % 5

-Report + Assignment % 5

Final Exam (% 60)

Your total mark: } 100%

- Coursework : % 40

- Final exam : % 60

15. Student learning outcome:

- Student learns new techniques and approaches for developing system more effectively and efficiently.
- Understand some of the fundamental aspects such as system, system analysis and system design, information system and information

technology.

- Help students understand some kinds of information systems such as Transactional Processing System (TPS), Management Information System (MIS), Decision Support System (DSS) and Executive Support System.
- Students will understand the fundamentals of system development life cycle and its four phases in depth which are planning, analysis, design and implementation.
- Realize what the many roles of the system analyst are.

16. Course Reading List and References:

1. – Dennis, A., Wixom, B. H., and Roth, R. M. (2012): *System Analysis and Design*. 5th edn. Hoboken: John Wiley & Sons, Inc.
2. – Dennis, A., Wixom, B. H., Tegarden, D. (2005): *Systems Analysis and Design with UML Version 2.0 An Object-Oriented Approach*. 2nd edn. Hoboken: John Wiley & Sons, Inc.
3. – Kendall, K. E. and Kendall, J. E. (2011): *System Analysis and Design*. 8th edn. New Jersey: Pearson Education, Inc.
4. Gavin Powell(2006): *Beginning Database Design*. Wiley publishing, Inc., Indianapolis, Indiana.
5. Rod Stephens(2009): *Beginning Database Design solutions*. Wiley publishing, Inc., Indianapolis, Indiana.

– Other relevant papers, websites and books.

17. The Topics:	Lecturer's name
Introduction to System Analysis and Design.	Week 1
SDLC (System Development Life Cycle).	Week 2
The Planning phase	Week 3
Apply Planning Phase On A system.	Week 4
Project Management.	Week 5
Analysis phase.	Week 6
Apply Analysis phase On A system.	Week 7
Requirements Gathering Techniques (1).	Week 8
Requirements Gathering Techniques (2).	Week 9
Introducing the Design Phase	Week 10
Apply Analysis Design On A system.	Week 11
The Architecture Design.	Week 12
The User Interface Design.	Week 13
Program Design	Week 14

Data Management Layer Design:	Week 15				
18. Practical Topics (If there is any)					
There is No practical part for this lesson					
<p>19. Examinations:</p> <p>1. Compositional:-</p> <p>-What is Business value?</p> <p>-What are the advantages and disadvantages of Throwing based methodologies?</p> <p>-What is Prototyping system? Briefly Explain?</p> <p>2. True or false type of exams:-</p> <p><i>Determine whether the following statements are true or False and Correct the false one.</i></p> <ol style="list-style-type: none"> 1. System analysis and design used to build information systems (IS). 2. Transactional Processing Systems (TPSs) are used by lower-level managers. <p>3. Multiple choices:</p> <p>Q.1. Choose the right answer for the questions below. There is ONLY ONE right answer.</p> <p>1)___ are used by top managers.</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">a. Transactional Processing Systems</td> <td style="width: 50%;">b. Executive Support Systems</td> </tr> <tr> <td>c. Knowledge Work Systems</td> <td>d. Group Decision Support Systems.</td> </tr> </table> <p>Gaps:-</p> <ol style="list-style-type: none"> 1. One of the three level architectures is..... which Deals with physical storage of data. 		a. Transactional Processing Systems	b. Executive Support Systems	c. Knowledge Work Systems	d. Group Decision Support Systems.
a. Transactional Processing Systems	b. Executive Support Systems				
c. Knowledge Work Systems	d. Group Decision Support Systems.				
20. Extra notes:					
21. Peer review	پیداچونہوہی ھاوہل				