



### Course description:

The course material encompasses the concepts, tools, and techniques required to analyze and design business information systems. The course will include structured development approaches and the system development life cycle, as well as rapid application development through alternative approaches such as prototyping. Emphasis will be given to the role of information systems in organizations and how they relate to organizational objectives and structure. Students will be introduced to system analysis and design modeling tools such as data flow diagrams, entity-relationship diagrams, data dictionaries, decision tables, decision trees, structured English, and structure charts.

The course methodology will include assigned readings from the textbook, lecture, written assignments and class discussions

### Aims of the course:

1. The student should know what is meant by System Development Life Cycle (SDLC) and the main activities involved in each stage of the (SDLC).
2. The student should be able to determine the most appropriate systems development method to use in various scenarios.
3. The student should be able to determine and document a project management plan for information system development cases. This plan will include components that address the development's schedule, process and quality.
4. The student should be able to use systems analysis models to document the information system requirements of an organization.

### Intended Learning Outcomes: (ILOs)

Upon successful completion of this course, students:

1. Will gain knowledge and understanding of system analysis
2. Will gain Knowledge and understanding of the different design and implementation used in system analysis
3. The student gain to use system design models to propose an information system design for an organization. The student able to document information system requirements and propose an information system design for a real organization Understanding Techniques and methods of Software Testing.

### A. General and Transferable Skills (other skills relevant to employability and personal development)

#### D1. Communication:

#### D2. Teamwork and Leadership:

Discuss and work in a group in order to study several cases, each of which has issues affecting the software testing in such a way.

### Course structures:

Week	Credit Hours	ILOs	Topics	Teaching Procedure	Assessment methods
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1	3	1	Course Description	<p>Lecturing with active participations.</p> <p>Problem solving.</p> <p>Cooperative learning.</p> <p>Discussion.</p> <p>Learning by activities.</p> <p>Connecting students with different sources of information</p>	<ul style="list-style-type: none"> <li>• Diagnostic tests to identify the students level and areas of weakness</li> <li>• Formal (stage) evaluation <ul style="list-style-type: none"> <li>a) Class Participation</li> <li>b) Exams</li> <li>c) Discuss project</li> </ul> </li> </ul>
2	3	1	Introduction, Assuming The Role of the Systems Analyst	<p>Lecturing with active participations.</p> <p>Problem solving.</p> <p>Cooperative learning.</p> <p>Discussion.</p> <p>Learning by activities.</p> <p>Connecting students with different sources of information</p>	<ul style="list-style-type: none"> <li>• Diagnostic tests to identify the students level and areas of weakness</li> <li>• Formal (stage) evaluation <ul style="list-style-type: none"> <li>a) Class Participation</li> <li>b) Exams</li> <li>c) Discuss project</li> </ul> </li> </ul>
3,4	4	A1, A3	Understanding Organizational Style and its impact on IS	<p>Lecturing with active</p>	<ul style="list-style-type: none"> <li>• Diagnostic tests to identify the students level</li> </ul>

				<p>participations.</p> <p>Problem solving.</p> <p>Cooperative learning.</p> <p>Discussion.</p> <p>Learning by activities.</p> <p>Connecting students with different sources of information</p>	<p>and areas of weakness</p> <ul style="list-style-type: none"> <li>• Formal (stage) evaluation           <ol style="list-style-type: none"> <li>a) Class Participation</li> <li>b) Exams</li> <li>c) Discuss project</li> </ol> </li> </ul>
4,5	4	A1,A2, A3	<p>Determining Feasibility and Managing Analysis and Design Activities</p>	<p>Lecturing with active participations.</p> <p>Problem solving.</p> <p>Cooperative learning.</p> <p>Discussion.</p> <p>Learning by activities.</p> <p>Connecting students with different sources of information</p>	<ul style="list-style-type: none"> <li>• Diagnostic tests to identify the students level and areas of weakness</li> <li>• Formal (stage) evaluation           <ol style="list-style-type: none"> <li>a) Class Participation</li> <li>b) Exams</li> <li>c) Discuss project</li> </ol> </li> </ul>
5,6,7	3	B1, C1	<p>Information Gathering :Interactive Methods Interviews, Questionnaires, Observations</p>	<p>Lecturing with active participations.</p> <p>Problem solving.</p>	<ul style="list-style-type: none"> <li>• Diagnostic tests to identify the students level and areas of weakness</li> <li>• Formal (stage) evaluation</li> </ul>

				Cooperative learning. Discussion. Learning by activities. Connecting students with different sources of information	a) Class Participation b) Exams c) Discuss project
8	1	D1, D2	Prototyping, RAD and Extreme Programming	Lecturing with active participations. Problem solving. Cooperative learning. Discussion. Learning by activities. Connecting students with different sources of information	<ul style="list-style-type: none"> <li>• Diagnostic tests to identify the students level and areas of weakness</li> <li>• Formal (stage) evaluation a) Class Participation b) Exams c) Discuss project</li> </ul>
9	3	B2, B3	Data Flow Diagrams	Lecturing with active participations. Problem solving. Cooperative learning.	<ul style="list-style-type: none"> <li>• Diagnostic tests to identify the students level and areas of weakness</li> <li>• Formal (stage) evaluation a) Class Participation b) Exams c) Discuss</li> </ul>

				<p>Discussion.</p> <p>Learning by activities.</p> <p>Connecting students with different sources of information</p>	project
10	3	B2, B3	Data Dictionaries	<p>Lecturing with active participations.</p> <p>Problem solving.</p> <p>Cooperative learning.</p> <p>Discussion.</p> <p>Learning by activities.</p> <p>Connecting students with different sources of information</p>	<ul style="list-style-type: none"> <li>• Diagnostic tests to identify the students level and areas of weakness</li> <li>• Formal (stage) evaluation <ul style="list-style-type: none"> <li>a) Class Participation</li> <li>b) Exams</li> <li>c) Discuss project</li> </ul> </li> </ul>
11	3	B2, B3	Preparing System Proposal	<p>Lecturing with active participations.</p> <p>Problem solving.</p> <p>Cooperative learning.</p> <p>Discussion.</p> <p>Learning by</p>	<ul style="list-style-type: none"> <li>• Diagnostic tests to identify the students level and areas of weakness</li> <li>• Formal (stage) evaluation <ul style="list-style-type: none"> <li>a) Class Participation</li> <li>b) Exams</li> <li>c) Discuss project</li> </ul> </li> </ul>

				activities.  Connecting students with different sources of information	
12,13	5	C2, C3	Designing Database	Lecturing with active participations. Problem solving. Cooperative learning. Discussion. Learning by activities. Connecting students with different sources of information	<ul style="list-style-type: none"> <li>• Diagnostic tests to identify the students level and areas of weakness</li> <li>• Formal (stage) evaluation <ul style="list-style-type: none"> <li>a) Class Participation</li> <li>b) Exams</li> <li>c) Discuss project</li> </ul> </li> </ul>
14	1	D1, D2	Discussion of Project	Discussion.  Connecting students with different sources of information	<ul style="list-style-type: none"> <li>• Diagnostic tests to identify the students level and areas of weakness</li> <li>• Formal (stage) evaluation <ul style="list-style-type: none"> <li>a) Class Participation</li> <li>b) Exams</li> <li>c) Discuss project</li> </ul> </li> </ul>
14	5	C1,C2,C3	Discussion of Project	Discussion.  Connecting	<ul style="list-style-type: none"> <li>• Diagnostic tests to identify the students level and areas of weakness</li> </ul>

				students with different sources of information	<ul style="list-style-type: none"> <li>Formal (stage) evaluation           <ol style="list-style-type: none"> <li>Class Participation</li> <li>Exams</li> <li>Discuss project</li> </ol> </li> </ul>
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## References:

### A. Main Textbook:

Analysis and Design, 6th Edition, by Kenneth E. Kendall and Julie E. Kendall

### B. Supplementary Textbook(s):

C. Electronic material available on the department web site.

## Assessment Methods:

Methods	Grade	Date
First Exam	15%	
Second Exam	20%	
Project	15%	
Final Examination	50%	

