



University/Academy: Arab Academy for Science and Technology & Maritime Transport  
Faculty/Institute: College of Computing and Information Technology  
Program: Information Systems, Computer Science, and Software Engineering

Form No. (12)  
Course Specification

1- Course Data

Course Code: IS372	Course Title: Information System Theory & Practice	Academic Year/Level: Year 3 / Semester 5
Specialization: Information Systems	No. of Instructional Units: 2 hrs lecture 2 hrs lab	Lecture:

2- Course Aim	Dealing with the Information Systems as it is being practiced in organizations today, the emphasis of this course is on the current issues that information systems executives find important; its organization is around a framework that students can understand. The course includes the rising societal risks of IT, digital convergence, messaging, and instant messaging, wireless technology, outsourcing and information security. The course merges theory with practice through real-world case examples.
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3- Intended Learning Outcome:

a- Knowledge and Understanding	<p>K13. Information systems, data and information management, enterprise architecture, IS project management, IT infrastructure, systems analysis and design, and IS strategies.</p> <p>K15.Tools, practices and methodologies used in the specification, design, implementation and evaluation of computer software systems.</p> <ul style="list-style-type: none"><li>• Identify External business environment</li><li>• Identify internal organizational environment</li><li>• Define the business strategies in the new work environment.</li><li>• Define the escalating benefits of IT.</li><li>• Identify traditional functions of IS.</li><li>• Identify CIO's responsibilities</li><li>• Define governing of IS.</li><li>• Identify investing of IS</li><li>• Define Managing of IS</li><li>• Define working inward:Business to Employee</li><li>• Define working outward:Business to Customer.</li><li>• Define working Across:Business to Business.</li><li>• Explain why planning is so difficult?</li><li>• Define business goals and system plans.</li></ul>
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	<ul style="list-style-type: none"> <li>• Explain why technologies are changing rapidly.</li> <li>• Identify what are the responsibilities that need to be joint.</li> <li>• Identify the critical success factors.</li> <li>• Identify the competitive forces model.</li> <li>• Identify the linkage analysis planning</li> <li>• Define IT architecture</li> <li>• Define IT infrastructure</li> <li>• Explain the evolution of distributed systems</li> <li>• Define distributed processing</li> <li>• Identify corporate policy for distributed computing</li> <li>• Explain the evolving telecommunications scene</li> <li>• Identify role of the IS department.</li> <li>• Define three level database model.</li> <li>• Define four data models in business.</li> <li>• Identify four types of information</li> <li>• Define operation.</li> <li>• Define operational measures.</li> <li>• Identify the importance of good management.</li> <li>• Define outsourcing</li> <li>• Define foundations of system development.</li> <li>• Identify software prototyping.</li> <li>• Define ERP systems.</li> <li>• Identify Internet Based systems</li> <li>• Define infrastructure management</li> <li>• Explain what is project management?</li> <li>• Identify risk management.</li> <li>• Define threats.</li> <li>• Identify the scope of security management.</li> <li>• Define real time enterprise</li> <li>• Define systems to support collaboration</li> <li>• Identify managing IT –Enabled workflows</li> </ul>
b- Intellectual Skills	<p><b><u>By the end of the course, the student acquires high skills and an ability to understand:</u></b></p> <p>I10. Define traditional and nontraditional information systems problems, set goals towards solving them, and. observe results</p> <p>I14. Select the suitable tools, methods and techniques for modeling, analyzing IS, establishing criteria, and verify solutions.</p> <p>I15.Perform comparisons between (algorithms, methods, techniques...etc)..</p> <ul style="list-style-type: none"> <li>• Compare different technology environment.</li> <li>• Compare between traditional and new roles of CIO.</li> <li>• Compare between three computing Eras</li> <li>• Compare between the cheap and disruptive revolution</li> <li>• Analyze the eight planning techniques</li> <li>• Compare and analyze the types of enterprise distributed systems</li> <li>• Distinguish between the different roles of systems.</li> </ul>
c- Professional Skills	<p><b><u>By the end of the course the student will have the ability to:</u></b></p> <p>P10. Use quantitative analysis techniques appropriately and effectively</p> <p>P12. Plan and manage an information systems project from inception to final implementation and cut-over</p> <p>P15.Evaluate systems in terms of general quality attributes and possible tradeoffs presented within the given problem.</p>

	<p>P19. Maintain existing information systems.</p> <ul style="list-style-type: none"> <li>• Build simple model on MeadWestvaco corporation.</li> <li>• Experiment American Airlines and the SABRE system.</li> <li>• Experiment the shippy industry case study.</li> <li>• Apply today's sense and respond approach to IT planning.</li> <li>• Use Microsoft case study.</li> <li>• Use shell oil case study.</li> <li>• Implement General Motors case example</li> <li>• Implement Toronto Pearson International airport case study.</li> <li>• Implement Owens &amp; Minor case example</li> <li>• Build a web service</li> <li>• Implement trucking company case study.</li> <li>• Design a problem solving scenario</li> </ul>										
d- General Skills	<p><b>Students will be able to:</b></p> <p>G1. Demonstrate the ability to make use of a range of learning resources and to manage one's own learning.</p> <p>G3. Show the use of information-retrieval.</p>										
4- Course Content	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 5px;">1. Understand the role of information system in modern business and the competitive advantage they can deliver for a company</td> </tr> <tr> <td style="padding: 5px;">2. Evaluate critically those current methods and techniques used to develop business and information strategies</td> </tr> <tr> <td style="padding: 5px;">3. Secure and evaluate key aspects of IS/IT provision</td> </tr> <tr> <td style="padding: 5px;">4. Understand the web impact in most business aspects and required web-based technologies</td> </tr> <tr> <td style="padding: 5px;">5. Analysis of business and their processes to recognize where the application of information systems and other IT systems can improve the efficiency of those processes</td> </tr> <tr> <td style="padding: 5px;">6. Organizing and implementing MIS</td> </tr> <tr> <td style="padding: 5px;">7. Project Management for Information Systems</td> </tr> <tr> <td style="padding: 5px;">8. Analysis of complex systems</td> </tr> <tr> <td style="padding: 5px;">9. Group working methods</td> </tr> <tr> <td style="padding: 5px;">10. Impact of change on stable systems</td> </tr> </table>	1. Understand the role of information system in modern business and the competitive advantage they can deliver for a company	2. Evaluate critically those current methods and techniques used to develop business and information strategies	3. Secure and evaluate key aspects of IS/IT provision	4. Understand the web impact in most business aspects and required web-based technologies	5. Analysis of business and their processes to recognize where the application of information systems and other IT systems can improve the efficiency of those processes	6. Organizing and implementing MIS	7. Project Management for Information Systems	8. Analysis of complex systems	9. Group working methods	10. Impact of change on stable systems
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5- Teaching and Learning Methods	Lectures, Labs, Projects, Individual study & self-learning.										
6- Teaching and Learning Methods for Students with Special Needs	<ul style="list-style-type: none"> <li>• Students with special needs are requested to contact the college representative for special needs ( currently Dr Hoda Mamdouh in room C504)</li> <li>• Consulting with lecturer during office hours.</li> <li>• Consulting with teaching assistant during office hours.</li> <li>• Private Sessions for redelivering the lecture contents.</li> <li>• For handicapped accessibility, please refer to program specification</li> </ul>										

7- Student Assessment:	
a- Procedures used:	Exams and Projects
b- Schedule:	Week 7 exam Projects through the semester Week 16Final exam
c- Weighing of Assessment:	7 <sup>th</sup> week exam 30% Project 20% Lab work 10% Final exam 40%
8- List of References:	
a- Course Notes	From the Moodle on <a href="http://www.aast.edu">www.aast.edu</a>
b- Required Books (Textbooks)	McNurlin, B. and Sprague, R., Information System Management in Practice, 8th edition prentice hall 2008.
c- Recommended Books	Ellen F.Monl and bret J. wagner, Concepts in enterprise Resource Planning 3rd edition course technology 2009
d- Periodicals, Web Sites, ..., etc.	

Course Instructor:

Head of Department:

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