

**University:** Alexandria  
**Faculty:** Science  
**Program:** Computer Science

**Form no. (12)  
Course Specification**

**1- Course Data**

<b>Course Code:</b> CS 407	<b>Course Title:</b> <i>System Analysis and Design</i>	<b>Academic Year/Level:</b> Fourth level (First semester)
<b>Specialization:</b> Computer Science	<b>No. of Instructional Units:</b> <b>Lecture</b> <input type="text" value="2"/> <b>Lab</b> <input type="text" value="1"/>	

<b>2- Course Aim</b>	<ul style="list-style-type: none"> <li>• This course is designed to encourage in students a sense of interest for System analysis and system design concept and the applications in different contexts</li> <li>• Provide a solid foundation in the major areas of system analysis and system design</li> <li>• Provide education and training of high quality in System design</li> </ul>
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<b>3- Intended Learning Outcome</b>
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<b>a- Knowledge and Understanding</b>	<p>a1. Describe the main concepts, definitions of regular systems</p> <p>a2. Review theories and concepts used in System analysis and system design</p> <p>a3. Identify an understanding of the contribution and impacts of System analysis and system design in scientific, social, economic, environmental, political and cultural terms.</p> <p>a4. modeling techniques and planning methods</p> <p>a5. Evaluating and designing of database</p>
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<b>b- Intellectual Skills</b>	<p>b1. Manipulate and apply appropriate theories, principles and concepts relevant to System analysis and system design</p> <p>b2. Critically assess and evaluate the literature within the field of System analysis and system design</p> <p>b3 Deduce and interpret information from a variety of sources relevant System analysis and system design</p>
<b>c- Professional Skills</b>	<p><b>c1.</b> Plan, design and execute practical activities using techniques and procedures Appropriate to System analysis and system design</p> <p><b>c2.</b> Execute a piece of independent research using System analysis and system design, planning system and techniques;</p>
<b>d- General Skills</b>	<p><b>d1.</b> Develop appropriate effective written and oral communication skills relevant to the specific course of System analysis and system design</p> <p><b>d2.</b> Demonstrate the ability to work effectively as part of a group</p> <p><b>d3.</b> Solve problems relevant to System analysis and system design using ideas and techniques some of which are at the forefront of the discipline.</p> <p><b>d4.</b> Solve problems relevant to <b>applications in real life</b> in computer science using old and new languages some of which are at the forefront of the discipline;</p>
<b>4- Course Content</b>	<ul style="list-style-type: none"> <li>• Types of information systems,</li> <li>• Information systems development life cycle,</li> <li>• Analytical skills, Managing the information systems project,</li> <li>• Gantt and pert charts,</li> <li>• Automated tools for systems development,</li> <li>• Identifying and selecting systems development projects,</li> <li>• Corporate strategic planning,</li> <li>• Information systems planning,</li> <li>• Project initiation and planning process,</li> <li>• Evaluating the technical risks,</li> <li>• Approaches to system development,</li> <li>• Investigating system requirements,</li> <li>• Modeling system requirements,</li> <li>• Process modeling. Logic modeling,</li> <li>• Conceptual data modeling,</li> <li>• The object-oriented approach to requirements,</li> <li>• Evaluating requirements, Designing databases, Designing interface.</li> </ul>

<b>5- Teaching and Learning Methods</b>	Lecturers – Home works - Oral discussion - Quizzes
<b>6- Teaching and Learning Methods for Students with Special Needs</b>	NONE
<b>7- Student Assessment:</b>	
<b>a- Procedures used:</b>	Lecturers – tutorials- homework – oral discussion - Quizzes
<b>b- Schedule:</b>	Mid-Term exam... .... Week 10 Final exam ..... Week 17
<b>c- Weighing of Assessment:</b>	Term work (exam + home works) 20% Lab exam 10% Oral exam 10% Final exam 60%
<b>8- List of References:</b>	<b><u>Service Design Patterns: Fundamental Design Solutions for SOAP/WSDL and RESTful Web Services</u></b> by <u>Robert Daigneau</u> (Nov 4, 2011)
<b>a- Course Notes</b>	Course notes provided by the Faculty member of Computer Science Division, Math department, to be handled at the beginning of the semester.

<b>b- Required Books (Textbooks)</b>	<u><b>Systems Analysis and Design</b></u> by Alan Dennis (2012)
<b>c- Recommended Books</b>	<u><b>Systems Analysis and Design</b></u> by Gary B. Shelly, Thomas J. Cashman and Harry J. Rosenblatt ( 2007)
<b>d- Periodicals, Web Sites, ..., etc.</b>	

**Course Instructor:** Dr. Yasser Fouad

**Head of Department:** Prof. Dr. Mahmoud El-Alem.

**Date:** 1/7/2012