Form no. (12)
Course Specification

1- Course Data

<table>
<thead>
<tr>
<th>Course Code:</th>
<th>Course Title:</th>
<th>Academic Year/Level:</th>
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<tbody>
<tr>
<td>CS 407</td>
<td>System Analysis and Design</td>
<td>Fourth level (First semester)</td>
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Specialization: Computer Science

No. of Instructional Units: Lecture 2 Lab 1

2- Course Aim

- 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.
- Provide a solid foundation in the major areas of system analysis and system design.
- Provide education and training of high quality in System design.

3- Intended Learning Outcome

a- Knowledge and Understanding

1. Describe the main concepts, definitions of regular systems.
2. Review theories and concepts used in System analysis and system design.
3. Identify an understanding of the contribution and impacts of System analysis and system design in scientific, social, economic, environmental, political and cultural terms.
4. Modeling techniques and planning methods.
5. Evaluating and designing of database.
| b- Intellectual Skills | b1. Manipulate and apply appropriate theories, principles and concepts relevant to System analysis and system design  
| | b2. Critically assess and evaluate the literature within the field of System analysis and system design  
| | b3 Deduce and interpret information from a variety of sources relevant System analysis and system design  
| c- Professional Skills | c1. Plan, design and execute practical activities using techniques and procedures Appropriate to System analysis and system design  
| | c2. Execute a piece of independent research using System analysis and system design, planning system and techniques;  
| d- General Skills | d1. Develop appropriate effective written and oral communication skills relevant to the specific course of System analysis and system design  
| | d2. Demonstrate the ability to work effectively as part of a group  
| | d3. Solve problems relevant to System analysis and system design using ideas and techniques some of which are at the forefront of the discipline.  
| | d4. Solve problems relevant to applications in real life in computer science using old and new languages some of which are at the forefront of the discipline;  
| 4- Course Content | Types of information systems,  
| | Information systems development life cycle,  
| | Analytical skills, Managing the information systems project,  
| | Gantt and pert charts,  
| | Automated tools for systems development,  
| | Identifying and selecting systems development projects,  
| | Corporate strategic planning,  
| | Information systems planning,  
| | Project initiation and planning process,  
| | Evaluating the technical risks,  
| | Approaches to system development,  
| | Investigating system requirements,  
| | Modeling system requirements,  
| | Process modeling. Logic modeling,  
| | Conceptual data modeling,  
| | The object-oriented approach to requirements,  
| | Evaluating requirements, Designing databases, Designing the interface.
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<th>5- Teaching and Learning Methods</th>
<th>Lecturers – Home works - Oral discussion - Quizzes</th>
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<tr>
<td>6- Teaching and Learning Methods for Students with Special Needs</td>
<td>NONE</td>
</tr>
<tr>
<td>7- Student Assessment:</td>
<td></td>
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<tr>
<td>a- Procedures used:</td>
<td>Lecturers – tutorials- homework – oral discussion - Quizzes</td>
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<tr>
<td>b- Schedule:</td>
<td>Mid-Term exam… …. Week 10 Final exam …………… Week 17</td>
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<td>c- Weighing of Assessment:</td>
<td>Term work (exam + home works) 20% Lab exam 10% Oral exam 10% Final exam 60%</td>
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<td>8- List of References:</td>
<td><strong>Service Design Patterns: Fundamental Design Solutions for SOAP/WSDL and RESTful Web Services</strong> by Robert Daigneau (Nov 4, 2011)</td>
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<tr>
<td>a- Course Notes</td>
<td>Course notes provided by the Faculty member of Computer Science Division, Math department, to be handled at the beginning of the semester.</td>
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<tr>
<td>b- Required Books (Textbooks)</td>
<td><strong>Systems Analysis and Design</strong> by Alan Dennis (2012)</td>
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<td>d- Periodicals, Web Sites, ..., etc.</td>
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**Course Instructor:** Dr. Yasser Fouad  
**Head of Department:** Prof. Dr. Mahmoud El-Alem.  
**Date:** 1/7/2012