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

Form no. (12)
Course Specification

1- Course Data

Course Code:	Course Title:	Academic Year/Level:
CS 312	*Software Design and Quality*	Third level (First semester)
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 Software Design and its application in different contexts • Provide a solid foundation in the major areas of Software Design • Provide education and training of high quality in Software Design
3- Intended Learning Outcome	
a- Knowledge and Understanding	a1. Describe the main concepts, definitions of Software testing a2. Review theories and concepts used in Design Patterns a3. Identify an understanding of the contribution and impacts of Software Design in scientific, social, economic, environmental, political and cultural terms. a4. The software interface a5. The software testing for all Software a6. The different types of design patterns

b- Intellectual Skills	b1. Manipulate and apply appropriate theories, principles and concepts relevant to Software Design b2. Critically assess and evaluate the literature within the field of Software Design b3 Deduce and interpret information from a variety of sources relevant to Software Design
c- Professional Skills	**c1.** Plan, design and execute practical activities using techniques and procedures Appropriate to Software Design **c2.** Execute a piece of independent research using **Software,** computer media and techniques;.
d- General Skills	**d1.** Develop appropriate effective written and oral communication skills relevant to the specific course of Software Design **d2.** Demonstrate the ability to work effectively as part of a group **d3.** Solve problems relevant to Software 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 Software and design patterns some of which are at the forefront of the discipline;
4- Course Content	- Critical aspects of the software lifecycle, - Quality of software system, - Techniques and approaches to software design, - Quality and reliability, - Domain engineering - Software reuse

5- Teaching and Learning Methods	Lecturers – Home works - Oral discussion **-** Quizzes
6- Teaching and Learning Methods for Students with Special Needs	NONE
7- Student Assessment:	
a- Procedures used:	Lecturers – tutorials- homework – oral discussion **-** Quizzes
b- Schedule:	Mid-Term exam… …. Week 10 Final exam ……………. Week 17
c- Weighing of Assessment:	Term work (exam + home works) 20% Oral exam 10% Final exam 70%
8- List of References:	Software Testing (2nd Edition) by Ron Patton (Paperback - Aug 5, 2005)
a- Course Notes	Course notes provided by the Faculty member of Computer Science Division, Math department, to be handled at the beginning of the semester.

b- Required Books (Textbooks)	
c- Recommended Books	
d- Periodicals, Web Sites, ..., etc.	

Course Instructor: Dr. Yasser Fouad
Head of Department: Prof. Dr. Mahmoud El-Alem.
Date: 1/10/2011