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

Form no. (12)
Course Specification

1- Course Data

Course Code:	Course Title:	Academic Year/Level:
CS 403	*Distributed Systems*	Fourth 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 Distributed Systems concept and its application in different contexts - Provide a solid foundation in the major areas of Distributed Systems - Provide education and training of high quality in Distributed Systems

3- Intended Learning Outcome

a- Knowledge and Understanding	a1. Describe the main concepts, definitions of Distributed systems a2. Review theories and concepts used in Distributed Systems a3. Identify an understanding of the contribution and impacts of Distributed Systems in scientific, social, economic, environmental, political and cultural terms. a4. Naming systems and Internet protocols a5. Distributed file system and replications a6. Client / server system and peer to peer system

b- Intellectual Skills	b1. Manipulate and apply appropriate theories, principles and concepts relevant to Distributed Systems b2. Critically assess and evaluate the literature within the field of Distributed Systems b3 Deduce and interpret information from a variety of sources relevant Distributed Systems
c- Professional Skills	**c1.** Plan, design and execute practical activities using techniques and procedures Appropriate to Distributed Systems **c2.** Execute a piece of independent research using Distributed Systems**,** computer media and techniques.
d- General Skills	**d1.** Develop appropriate effective written and oral communication skills relevant to the specific course of Distributed Systems **d2.** Demonstrate the ability to work effectively as part of a group **d3.** Solve problems relevant to Distributed Systems 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 protocols some of which are at the forefront of the discipline;
4- Course Content	- Basic distributed systems architecture, - Hardware, Software systems, - Parallel computers, Parallel and grid computing, - Communication in distributed systems, - Communication in parallel systems, - Performance/scalibility, - Client-server model, - Remote procedure calls, - Synchornization problems in distributed systems, - Processes and processors in distributed systems, - Distributed file systems, - Distributed shared memory, - Parallel algorithms and Programming languages.

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:	Distributed Systems
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)	**Distributed Systems: Principles and Paradigms (2nd Edition)** by Andrew S. Tanenbaum and Maarten Van Steen 2006
c- Recommended Books	**Distributed Systems: Concepts and Design (5th Edition)** by George Coulouris, Jean Dollimore, Tim Kindberg and Gordon Blair (2011)
d- Periodicals, Web Sites, …, etc.	

Course Instructor: Dr. Yasser Fouad
Head of Department: Prof. Dr. Mahmoud El-Alem.
Date: 1/9/2012