University / Academy: Menoufiya University

College / Institute: Faculty of Electronic Engineering

Department: Computer Science and Engineering

Course Specification

1- Course basic information:		
Course Code: CSE 471	**Course Title:** (**Parallel systems and their Applications**)	**Academic year: 2011/2012** **Level (4) – Semester : 2**
Faculty requirement	**Teaching hours: Lecture** 2 **Tutorial** 2 **Lab** 0	

2- Aim of the course	- To introduce the students to the basic of parallel processing system - To learn the basic of parallel processing system - To develop the students skills to analyzer of parallel processing system - To develop the students skills to design of parallel processing system - To develop the students skills to algorithm of parallel processing system algorithms
3- Intended Learning Outcomes: design of parallel processing system	
A- Knowledge and Understanding:	- a1. Concepts and theories of mathematics and sciences, appropriate to the computer science and engineering - a15 Related research and current advances in the field of computer software and hardware - a16 Technologies of data, image and graphics representation and organization on computer storage media
B- Intellectual Skills	b1 Select appropriate mathematical and computer-based methods for modeling and analyzing problems.

	b2 Select appropriate solutions for engineering problems based on analytical thinking b3 Think in a creative and innovative way in problem solving and design b4 Combine, exchange, and assess different ideas, views, and knowledge from a range of sources b7 Solve engineering problems, often on the basis of limited and possibly contradicting information. b13 Select the appropriate mathematical tools, computing methods, design techniques and tools in computer engineering disciplines, for modeling and analyzing computer systems.
C- Professional Skills	c 1 Apply knowledge of mathematics, science, information technology, design, business context and engineering practice integrally to solve engineering problems c11. Exchange knowledge and skills with engineering community and industry. c8 Apply safe systems at work and observe the appropriate steps to manage risks c9 Demonstrate basic Organizational and project management skills. c10 Apply quality assurance procedures and follow codes and standards c14. Use appropriate specialized computer software, computational tools and design packages throughout the phases of the life cycle of system development c15. Write computer programs on professional levels achieving acceptable quality measures in software development.
D- General Skills	d2 Work in stressful environment and within constraints d6. Effectively manage tasks, time, and resources d8 Acquire entrepreneurial skills design
4- Course Contents	Introduction-basic parallel constructs - performance models of parallel computers - Parallel algorithms - Parallel computer architecture - multi-threaded architectures-Commercial database servers - data-intensive applications - reliability requirements.

5- Teaching and Learning Methods	- Lectures. - Exercises and tutorials. - Research assignments.
6- Teaching and Learning Methods for disable students	N/A
7- Student Assessment	
a- Assessment Methods	- Reports, assignments, exercises, and midterm and final written exams to assess knowledge and understanding. - Regular oral and written quizzes to assess intellectual skills - Oral exams to assess professional skills. - Reports and project , assignments, and discussions to assess general and transferable skills.
b- Assessment Schedule	- Quizz-1: Week no 5 - Mid-Term exam: Week no 8 - Quizz-2: Week no 11 - Quizz-3: Week no 14 - Final – term examination: Week no 15
c- Weighting of Assessment	- Class tutorial and quizzes : 5 % - Mid-term examination: 10 % - Case study and/or practical exam: 10 % - Final – term examination: 70 % - Other types of assessment: 5 % Total 100 %
8- List of text books and references:	
a- Course notes	- There are lectures notes prepared in the form of a book authorized by the department.
b- Text books	- Kai Hwang, “Advanced Computer Architecture”. - William Stallings, “Computer Organization & Architecture”.
c- Recommended books	- None.
d- Periodicals, Web sites ……etc	- None.

Course Contents - ILOs Matrix

Content Topics	Week	A- Knowledge & Understanding	B- Intellectual skills	C- Professional and practical skills	D- General and transferable skills
Introduction-basic parallel constructs	½	a15,a16	b1, b2	c1,c8,c9,c10,c14,c15	d2, d6,d8
performance models of parallel computers	3/4.	a15,a16	b1,b2,b3	c1,c9,c10	d2,d6,d8
Parallel algorithms and Parallel computer architecture	5/6/7	a1, a15,a16	b1,b2,b3,b4	c9,c10	.d2,d6,d8
multi-threaded architectures and Commercial database servers	8/9/10/11	a1, a15,a16	b1,b2,b3	c9,c10	.d2,d6,d8
data-intensive applications and reliability requirements.	12/13/14	a15,a16	b1,b7,b13	c9,c10	d2,d6,d8

Course coordinator: **Head of Department:**

Dr. Hoda Sorour **Prof. Nawal Ahmed El-Fishawy**

Date: / /