Distributed and Parallel Systems
CES 601

Benha University | **Computer Systems Engineering**
Electrical Engineering Department | **Faculty of Engineering**
(at Shoubra)

Course Title:	Distributed and Parallel Systems
Course Code:	CES 601
Course Page:	http://www.bu.edu.eg/staff/islam.elshaarawy-courses
Instructor:	Dr. Islam ElShaarawy (http://www.bu.edu.eg/staff/islam.elshaarawy)
Main Textbook:	Ananth Grama, George Karypis, Vipin Kumar, and Anshul Gupta. *Introduction to Parallel Computing*. 2nd Edition, Pearson Education Limited, 2003, ISBN 978-0201648652.

Online Resources:

http://www-users.cs.umn.edu/~karypis/parbook/
https://www.open-mpi.org/
http://www.openmp.org/
https://developer.nvidia.com/cuda-toolkit

Course Contents:

1. Introduction to Parallel Computing
2. Parallel Programming Platforms
3. Principles of Parallel Algorithm Design
4. Basic Communication Operations
5. Analytical Modeling of Parallel Programs
6. Programming Using the Message-Passing Paradigm
7. Programming Shared Address Space Platforms
8. Dense Matrix Algorithms
9. Sorting
10. Graph Algorithms
11. Search Algorithms for Discrete Optimization Problems
12. Dynamic Programming
13. Fast Fourier Transform

Course Policy:

1. Attendance is compulsory.
2. **Reading the relevant chapter(s) ahead of lectures is essential.**
3. Keeping track of whatever happens during the lectures is the student responsibility regardless of attendance.
4. Side talking, cellphones, laptops, food/drinks, and walking[1] are not allowed.

5. **Leaked solution manual as well as any other resources (unless otherwise specified) should never be used for solving the assignments.**

Grading System:

Attendance[2]:	000
Assignments:	010
Quizzes:	010
Midterm Exam:	010
Project:	010
Final Exam:	060
Total	100

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1   If you are late for the lecture, then you are allowed to walk into the lecture hall but quietly.
2   Attendance will be taken anyway.