

**University of Jordan**  
**Computer Engineering Department**  
**Course Outline**  
**Distributed Systems (0907741)**

### **I. Course Description**

Introduction to Distributed Systems. Distributed Operating Systems. Processes and Inter-process Communication (IPC). Distributed File Systems. Remote Procedure Calls (RPC). Security Models. Distributed Architectures and Technologies. Middleware. Object Based Distributed Systems. Messaging and Message Oriented Systems. Agent-Based Systems. Distributed Application Project.

**Prerequisite:** 0907721

### **II. Textbook and References**

1. Andrew S. Tanenbaum and Maarten van Steen, Distributed Systems: Principles and Paradigms, 2<sup>nd</sup> Edition. Book URL: <http://www.cs.vu.nl/~steen/books/ds2/>
2. Coulouris, George F. Distributed Systems: Concepts and Design, 4/e. Pearson Education India, 2009.
3. Hennessy and Patterson. Computer Architecture: A Quantitative Approach, 5th ed., Morgan Kaufmann, 2011.
4. D. Culler and J.P. Singh with A. Gupta. Parallel Computer Architecture: A Hardware/Software Approach, Morgan Kaufmann, 1998.

### **III. Student Materials**

Textbook, References, Class Handouts, Web Homepages, PC, and the Internet.

### **IV. College Facilities**

A classroom with whiteboard and projection facilities, library, and computer laboratory.

### **V. Instructional Methods**

1. Lectures
2. Office discussions
3. Projects and presentations by the students
4. Course homepage at [http://www.abandah.com/gheith/?page\\_id=768](http://www.abandah.com/gheith/?page_id=768)
5. Facebook page posts and discussions on <http://www.facebook.com/Cpe741DistributedSystems>

### **VI. Evaluation of Outcomes**

1. Mid-Term Exam — 30%
2. Term Project's Report and Presentation — 30%
3. Final Exam — 40%

### **VII. Class Policies**

- Attendance is required
- All submitted work must be yours
- Cheating will not be tolerated
- Open-book exams
- Follow the facebook page (Like it)
- Check program announcements at: <http://www.facebook.com/pages/Master-in-Computer-Engineering-and-Networks-in-the-University-of-Jordan/257067841079897>

## VIII. Course Outline

- Introduction to distributed systems: Goals and main types. (Chapter 1)
- Architectures of distributed systems. (Chapter 2)
- Processes and process management in distributed systems (Chapter 3)
- Communication (Chapter 4)
- Naming (Chapter 5)

### *Midterm Exam*

- Synchronization (Chapter 6)
- Consistency & Replication (Chapter 7)
- Fault Tolerance (Chapter 8)
- Security (Chapter 9)
- Distributed File Systems (Chapter 11)
- Distributed Web-Based Systems (Chapter 12)

### *Final Exam*

## IX. Schedule

The following table contains the important dates of this course.

Date	Event
Sun 9 Jun 2013	Classes Begin
Mon 8 Jul 2013	Midterm Exam
Wed 24 Jul 2013	Term project report is due and start of project presentations
Sun 28 Jul 2013	Last Lecture
Jul 30 – Aug 1, 2013	Final Exam Period

## X. Sections and Instructors

Sec	Meeting Time	Room	Instructor	Office Hours	e-mail, Homepage
1	Sun thru Thu 3:40-4:40	CPE 001	Dr. Gheith Abandah	TBA	<a href="mailto:abandah@ju.edu.jo">abandah@ju.edu.jo</a> , <a href="http://www.abandah.com/gheith">http://www.abandah.com/gheith</a>