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, 2nd 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=908
5. Facebook group posts and discussions on https://www.facebook.com/groups/503483099764654/

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
- Join the facebook group
- 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 16 Feb, 2014	Classes Begin
Mar 30 – Apr 17, 2014	Midterm Exam Period
Tue 8 Apr, 2014	Term project proposal is due
Tue 20 May, 2014	Term project report is due and start of project demonstrations
Tue 27 May, 2014	Last Lecture
May 31 – Jun 9, 2014	Final Exam Period

X. Sections and Instructors

Sec	Meeting Time	Room	Instructor	Office Hours	e-mail, Homepage
1	Sun & Tue 3:30-5:00	CPE 001	Dr. Gheith Abandah	Sun 11-12 Mon 11-12 Thu 9-10	abandah@ju.edu.jo, http://www.abandah.com/gheith