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College of Engineering & Computer Science

Winter 2011

## CEG 435/635: Distributed Computing and Systems

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# CEG 435/635 Distributed Computing and Systems

### **Syllabus**

Winter Quarter, 2011

Time/Place:

Lecture: 6:05 - 7:20 PM, Tu. & Th., Joshi 193

Instructor:

Dr. Yong Pei, 489 Joshi Research Center

Tel. 937-775-5111, Email: yong.pei@wright.edu

Office Hours: 5:00-6:00 pm, Tu. & Th.

Prerequisite;

CEG 433 or equivalent.

Expected background: operating system, process and thread, Java or C/C++ programming experience in Windows, Mac OS, UNIX or

Linux.

Course

Description:

Study of process coordination, client-server computing, distributed objects, transactions, concurrency control, recovery of transactions, network and distributed file systems, distributed operating systems,

and fault-tolerant computing.

Text Books:

Required: Coulouris, G., Dollimore, J., and Kindberg, T., Distributed Systems: Concepts and Design, 4th Edition, Addison Wesley, 2005 References: Tanenbaum, A. and Maarten van Steen, Distributed Systems Principles and Paradigms, 2002: Prentice-Hall, ISBN 0-13-

088893-1.

Website:

CEG435-635 in WebCT.

Grading:

Project assignment −30 %

Homework – 10% Midterm Exam – 30%

Final - 30%

#### Lectures:

The following tentative schedule defines in greater details what material is covered in the course and when it is covered.

Week	Reading	Contents
1	Chapter 1 Chapter 2	Welcome and introduction Models of distributed Systems
2	Chapter 3 Chapter 4	Networking IPC
2,3	Chapter 5	Remote procedure call Distributed objects and Remote Invocation Concurrent programming in a distributed environment
4, 5	Chapter 6 Chapter 7	OS Supports DFS
5	Thursday	Midterm Exam
6	Chapter 9	Name, directory & discovery services
7	Chapter 10	Peer-to-peer systems
8	Chapter 13, 15	Transaction processing Concurrency control Fault tolerant services
9, 10	Chapter 17 Notes	Design Experiences: Distributed multimedia systems, Sensor web systems
10	Thursday	FINAL EXAM
11		Open-Design Project Presentations