

Winter 2008

CEG 435/635-01: Distributed Computing and Systems

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CEG 435/635
Distributed Computing and Systems

Syllabus

Winter Quarter, 2008

- Time/Place:** Lecture: 12:20 – 1:35 PM, Tu. & Th., RC154
- Instructor:** Dr. Yong Pei, 489 Joshi Research Center
Tel. 937-775-5111, Email: yong.pei@wright.edu
Office Hours: 2:00-4:00 pm, Wed.
- Prerequisite:** CEG 433 or equivalent.
Expected background: operating system, process and thread, C or C++ programming experience in 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 – 15%
Midterm Exam – 25%
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
3	Chapter 5	Remote procedure call Distributed objects
4	Chapter 13	Transaction processing Concurrency control
5	Chapter 14	Distributed transaction Midterm Exam
6	Chapter 12	Mutual exclusion, a tree-based algorithm for distributed mutual exclusion, Elections
7	Chapter 7	Distributed file systems
8	Chapter 9 Chapter 10	Name, directory & discovery services Peer-to-peer systems
9	Chapter 15	Fault tolerant services Transactions with replicated data
10	Chapter 17 Notes	Advanced distributed system design topics Distributed multimedia systems Distributed sensor systems
11		FINAL