

Winter 2010

# CEG 435/635-01: Distributed Computing and Systems

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# CEG 435/635 Distributed Computing and Systems

## Syllabus

Winter Quarter, 2010

- Time/Place:** Lecture: 10:25 – 11:40 AM, Tu. & Th., Joshi 193
- Instructor:** Dr. Keke Chen, Joshi 385  
Tel. 937-775-4642, Email: keke.chen@wright.edu  
Office Hours: 2:00-4:00 pm, Thursday
- Prerequisite:** CEG 433 or equivalent.  
Expected background: operating system, algorithms, C/C++ programming experience in UNIX or Linux.
- Course Description:** Study of process coordination, client-server computing, network and distributed operating systems, network and distributed file systems, concurrency control, recovery of distributed transactions, 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%
- A[100,90], B[89,80],C[79,70],D[69,60] F [59,0]  
The instructor reserves the right to curve the grades according to the grade distribution.

## Lectures:

The following is a tentative schedule.

Week	Reading	Contents
1	Chapter 1 Chapter 2	Welcome and introduction Models of distributed Systems
2	Chapter 4 +papers	IPC Group communication
3	Chapter 5	Remote procedure call Distributed objects and consistency
4	Chapter 13	Transaction processing Concurrency control
5	Chapter 14	Distributed transactions <b>Midterm Exam</b>
6	Chapter 11, 12	Event ordering, global states, and time Coordination and agreement
7	Chapter 7 + papers	Distributed file systems Hadoop
8	Chapter 9, 10 + papers	Naming, resource finding, peer-to-peer systems, and publish/subscribe systems
9	Chapter 15 +papers	Failures, fault tolerant services and data replication
10	papers	Data intensive systems Cloud computing
11		<b>FINAL</b>