Spring 2005

CEG 435/635-01: Distributed Computing and Systems

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Course Description

Study of distributed computing principles and systems. Issues such as distributed architecture, process coordination, client-server computing, deadlock, network and distributed operating systems, network and distributed file systems, concurrency control and recovery of distributed transactions, and fault-tolerant computing, and real-time distributed systems are studied. Design and implementation projects related to some of these issues are also assigned.

Professor

Dr. Thomas C. Hartrum
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Class Hours: M W 8:00-9:15 PM, Russ Center, Room 154

Text


Prerequisites

CEG433 or CEG633

and

CEG434 or CEG634

Grading

Grading will be as follows:

Homework 10
Labs & Projects 35
Midterm 25
Final Exam 30

Course grades will be based on the total score as follows. A: 90-100, B: 80-89, C: 70-79, D: 60-69, F: below 60. Grades may be further curved if appropriate.

You may work with others on homework assignments, but you must turn in your own individual work. Homework that has obviously been copied
will result in a grade of zero for both parties and will be reported to the Office of Judicial Affairs, as will any other form of cheating. Labs and the project will be worked in teams. You may pick your partner(s) or I will pick them. More detail on the project will be handed out later. Ten percent will be deducted for unexcused late work.

**Tentative Schedule**

**Topic Tanenbaum Reilly & Reilly**

1 M(3/28) Introduction Chapter 1
   W(3/30) Introduction, Communications Ch 1, Ch 2: 57-68 Chapter 1
2 M(4/04) Java Introduction Chapter 2
   W(4/06) Java Client-Server Chapters 3, 4, 6
3 M(4/11) Communications Ch 2: 68-119
   W(4/13) Communications Ch 2: 68-119 Chapter 11
4 M(4/18) Processes: threads Chapter 3.1 Chapter 7
   W(4/20) Processes: clients & servers Chapter 3.2-3.3
5 M(4/25) Processes: migration & agents Chapter 3.4-3.5
   W(4/27) Catch up; review Chap. 1-3 Ch 1-4, 6-7, 11
6 M(5/02) In class midterm Chap. 1-3 Ch 1-4, 6-7, 11
   W(5/04) Project discussion
7 M(5/09) Application protocols Ch 2: 66-67 Chapters 8 & 9
   W(5/11) Naming, Synchronization Ch 4: 4.1-4.2, Ch 5
8 M(5/16) Synchronization Chapter 5
   W(5/18) Synchronization Chapter 5
9 M(5/23) Consistency & Replication Chapter 6
   W(5/25) Consistency & Replication Chapter 6
10 M(5/30) Holiday
   W(6/01) Review All
Fin M(6/06) 8:00 PM - 10:00 PM Final All

**Note:** There will be *no* early final exam – plan your travel accordingly. In case of a legitimate conflict, a makeup final can be arranged.

**Note:** M = Monday, W = Wednesday.