Course Information

This information handout describes the following information about the course – essentials, overview, participation, schedule, policies, and supplementary material.

Course Essentials

Pre-requisites: CS 241 (Systems Programming), or equivalent course on Operating Systems or Networking (approval of instructor required for latter).

Credits: 3 Hours

Main Textbook: Couloris, G., Dollimore, J., Kindberg, T. "Distributed Systems: Concepts and Design", Addison-Wesley, Fourth Edition, ISBN: 0201619180 [Recommended purchase – copies available at Illini Book Store. On reserve at Grainger library]

Note: *The third edition ought to suffice for most of our material, but we will refer to chapter, section and problem numbers ONLY in the Fourth Edition. Correct interpretation/translation of these numbers in the 3rd edition is solely the students' responsibility (no excuses).*

Supplementary books are listed at the end of this handout. The latest editions available at the Grainger Library have been put on reserve. We may also read some research papers. All supplementary material from sources outside of the aove main textbook will be provided to you as and when needed.

Course Staff:

Professor	Dr. Klara Nahrstedt
	3104 Siebel Center, (klara@cs.uiuc.edu), 244-6624 (office)
Teaching Assistant	Ying Huang
	207 Siebel Center, (ta425@cs.uiuc.edu), 244-1976 (office)
Administrative Help	Lynette Lubben
	3120 Siebel Center, (llubben@illinois.edu), 333-3328 (office)

Timing:

Lecture: Tuesdays and Thursdays, 2:00 PM – 3:15 PM, 1105 Siebel Center

Office Hours (Tentative):

Professor Klara Nahrstedt   We: 9:00 AM – 10:00 AM, Th 9:00 AM – 10 AM, 3104 SC

TA – Ying Huang   Mo: 2:00 PM – 3:00 PM, Th 3:15 PM – 4:15PM, 207 SC

Course Website: http://www.cs.uiuc.edu/class/fa09/cs425

All updates/announcements will be posted on the website. Please, check the website periodically.

Communicating with the Course Staff:

You have three options:

1. Post messages on the newsgroup: class.cs425
2. Email the instructor or TA
3. Visit instructor or TA during their posted office hours

Please, use the newsgroup for questions/discussions on homework and programming assignments – however, if you post a solution (code or writeup) to the newsgroup, you will lose all points for that particular assignment. User email only when you cannot use the newsgroup, e.g., if you have an urgent question, or if you have a personal matter to ask/discuss.

Course Overview (or – what will I learn from this course?)

This course focuses on basic concepts underlying the design, implementation, and management of distributed systems. It covers fundamental topics such as basic concepts in distributed systems, synchronization, election, distributed agreement, inter-process communication and coordination, replicated data management, distributed objects, security, and directory and discovery services. These are discussed in the context of real-life and deployed systems such as distributed files systems, peer-to-peer systems, mobile and ubiquitous distributed systems, the grid and others. This course does not deal with the details of computer networking (e.g., details of different routing protocols in the Internet – take cs438 or 598mc), except as applied to topics listed above.

Course Participation

Assignments:

1. Homework set will be distributed as specified on the website (approximately in bi-weekly basis). Your homework solution submissions are required to be typed (you may use any of your favorite word processors). We will not accept handwritten solutions. Figures and equations (if any) may be drawn by hand. Homework will be due at the beginning of the class on the day of the deadline. **Homework efforts are individual efforts (not group efforts)**.
2. Three programming assignments will be given throughout the semester, each requiring 2-4 weeks of effort. You may choose to work in groups of up to 3 students for each of the projects. You may change groupings from one assignment to the next, although we do not suggest you do so.

Grading:

- Homework sets: 20%
- Programming assignments: 40% (MP1 – 10%, MP2 – 16%, MP3 – 14%)
- Midterm exam: 10%
- Final Exam 30%

Notes: (1) Grading of undergraduate and graduate students will be separate; (2) Grades will be assigned on a curve (relative grading); (3) Homework sets and programming assignments are as value-able as the exams, so do not ignore any of them.

Lecture Participation: attending lectures is important. To facilitate better understanding of the material from different perspectives, you are expected to have read the relevant chapters from the main textbook/papers for a lecture before the lecture. These readings will be specified.

Course Policies

Policy on Attribution: It is the course policy that all of your work you submit for grading, or in support of graded material, as an individual or project group, shall either be your own thought product or clearly and specifically credited to the proper source. In other words, you must clearly and visibly provide proper attribution for ideas and expressions that you borrow from others.

Violations of this policy will be treated seriously. We will give you less than full credit for a submission, that is not whole yours. The maximum penalty of the course-level is a final grade of 'F', with no permission to drop (other penalties might be imposed by the University). In short, we recommend that you do not violate this policy.

Policy on Late Submissions: (MPs) All MPs will be demonstrated in the CSIL laboratories, sign up sheet will be provided prior to the demonstration, hence late submission issues do not apply. Each MP must be demonstrated on a specific deadline date. At least one member of each group must be present to start the system, demonstrate functions as specified in MP assignments and respond to questions about the design and code (the students will be required to display the code and explain code they used in their MPs) to the instructor and TA.

(Homework) Homework sets or components thereof that must be submitted by other means are due at the beginning of class on the due date. **No late homework sets** will be accepted except under extremely rare non-academic circumstances (which usually require approval from the Dean's office).

Supplementary Textbooks

The following textbooks may be used for supplementary course material. They are also useful for back reference to basic material. You are not required to own these books. They are on reserve at the Grainger Library (if available). You may be able to use a prior edition of the textbook if you own one.

Distributed Systems:

1. "Distributed systems: principles and paradigms", A. Tanenbaum and M. Steen, Prentice Hall, 1st edition, 2002
2. "Distributed algorithms: concepts and design", N. Lynch Morgan-Kaufman, 1st edition, 1996
3. "Distributed computing: fundamentals, simulations and advanced topics", H. Attiya and J. Welch, McGraw Hill, 1st edition, 1998

Computer Networks:

1. "Unix network programming", W.R. Stevens, Addison-Wesley, 3rd edition, 2002
2. " An engineering approach to computer networking", S. Keshav, Addison-Wesley, 1st edition, 1997
3. "Computer networks", A. Tannenbaum, Prentice Hall, 4th edition, 2002

Operating Systems:

1. "Operating Systems: internals and design principles", W. Stallings, Prentice Hall, 5th edition, 2005
2. "Applied operating systems concepts", Silberschatz, Galvin, Gagne, Wiley, 6th edition, 2002
3. "Modern Operating Systems", A. Tannenbaum, Prentice Hall, 2nd edition, 2001