

CS 425/ECE 428 Distributed Systems, Spring 2016  
University of Illinois at Urbana-Champaign

Prerequisite: CS 241 (System Programming) or ECE 391 (Computer Systems Engineering)

Textbook: G. Coulouris, J. Dollimore, T. Kindberg, and G. Blair, Distributed Systems: Concepts and Design, Addison-Wesley, 5th edition. We may also use some material from papers from journals and conferences. You will be provided information on these at a later time. Some relevant books are on reserve at the Grainger Library.

Course Instructor:

- Nitin H. Vaidya, Phone: 217-265-5414 E-mail: nhv@illinois.edu  
Office: 456 Coordinated Science Lab.  
Office hours: to be announced on course website

Lecture: Tuesday and Thursday, 9:30-10:45 a.m., room 1320 Digital Computer Laboratory (DCL)

Course Website: <http://courses.engr.illinois.edu/cs425>

Piazza page: <https://piazza.com/illinois/spring2016/cs425ece428/home>

Please monitor the course website and Piazza group above for course-related announcements.

Course Overview:

This course focuses on basic concepts underlying the design, implementation, and management of distributed systems. It covers fundamental topics in distributed systems, including but not limited to synchronization, mutual exclusion, leader election, distributed agreement, replication, shared data consistency, concurrency control.

Grading policy for 3-hour version of the class:

Homework: 18%

Two mid-term Exams: 48% (total for 2 mid-term exams)

Final exam: 34 %

Grading policy for 4-hour version of the class:

Homework: 14%

Programming Assignments: 25%

Two mid-term Exams: 36% (total for 2 mid-term exams)

Final Exam: 25%

Grades will be assigned on a curve (relative grading). The fraction of students receiving A's is not fixed a priori, and depends on the overall class performance.

#### Course Participation:

Attending the lectures is important. To facilitate better understanding of the material, you are expected to read the relevant reading material (e.g., relevant chapters from the textbook) in a timely manner.

We prefer that you use the Piazza group for general questions regarding the course, including homework and programming assignments (e.g., questions asking for clarification of an assignment). However, please do NOT post a solution (code or write-up) on Piazza newsgroup.

#### Course Policies:

- Please bring a photo ID to each exam.  
All exams will be closed-book, closed-notes.  
Communication devices (e.g., cellphone, laptop) may not be used during the exams.
- Homework is individual activity (i.e., not to be performed in groups). All text in your homework submissions is required to be typed (you may use any suitable text editor or word processor). Figures or equations in your submission may be drawn by hand.
- Programming assignments are to be performed in groups consisting of 2 students each.
- Regrade request for any component of the course must be submitted within 10 days after the corresponding grade is posted on Compass2g.
- Academic Integrity Policy: We adhere by the CS Honor Code and Academic Integrity policies outlined at the webpage below.

<http://cs.illinois.edu/current-students/undergraduates/policies-and-procedures-0/honor-code-and-academic-integrity>

It is the course policy that all of the work you submit for grading, or in support of graded material, as an individual or as a group, shall be your own product, from inception to completion. Violations of this academic integrity policy will be treated seriously.

- Policy on Late Submission:

A 48-hour extension beyond the due time for each homework and programming assignment is granted to all students.

Additional extensions (without penalty) will be granted only under extenuating circumstances, which will require instructor's approval, and in some cases, approval from the Dean's office; you may also be asked to provide appropriate documentation to support your request for late submission.

Homework submitted after the 48-hour extension will not receive credit, except if an additional extension is granted as described above.

For a programming assignment submitted after the 48-hour extension, 15% penalty will be assessed for each additional day, or part thereof, that the submission is late.

**Acknowledgements:** The slides and other materials used in the course borrow heavily from those designed or revised by other instructors, particularly Prof. Indranil Gupta, Prof. Jennifer Hou, Prof. Mehdi Harandi, Prof. Klara Nahrstedt, and Prof. Sayan Mitra. Instructional materials provided by the authors of the textbook may also be used for the class.