CS 325 Principles of Operating Systems  
Syllabus – Spring 2007

MW 9:30 - 10:45 am, Cramer Hall 203

Instructor: Xiao Qin  
Office Hours: W 14:00-16:00 pm

Phone/Office: 835-5902 / Cramer Hall 231A

Office Hours: W 15:15-17:15 pm

Email: xqin@cs.nmt.edu

TA: TBD  
Office Hours: W 14:00-16:00 pm

Phone/Office: TBD

Email: TBD

Class Web Page

Homeworks and announcements are posted on the class web page:
http://www.cs.nmt.edu/~xqin/courses/cs325

Handout, assignments, and important course information will be posted periodically on the class web page, which you have to regularly check.

Prerequisite: CS221 and CS222

Objectives

CS325 aims to:

• educate students on the fundamental concepts and components of operating systems;
• introduce the characteristics of hardware related to operating systems; and
• present the good tradeoffs among objectives conflicting with one another.

On completion of the course, students should be able to:

• understand the essential concepts and mechanisms of operating systems;
• distinguish between mechanisms and policies;
• know the state-of-the-art technologies in operating systems research and development; and
• demonstrate ability to program at low levels.

Textbook


Additional Optional Reading


Topics Covered
Topics covered include: the concept of a process, concurrency problems, synchronization, mutual exclusion, deadlocks, memory management, file systems, process scheduling, threads, and protection. (These topics may change.)

Exams and Grading
Prerequisite Exam  5%
Class Participation  5%
Quizzes  10%
Mid-term  20%
Final Exam  20%
Laboratory Assignments  40%

Scale
Letter grades will be awarded based on the following scale. This scale may be adjusted upwards if it is necessary based on the final grades.
A+ ≥ 97   A ≥ 93   A- ≥ 90   B+ ≥ 87   B ≥ 83   B- ≥ 80   C+ ≥ 77   C ≥ 73
C- ≥ 70   D+ ≥ 67   D ≥ 63   D- ≥ 60   F < 60

Reading
Students are expected to read the appropriate sections of the book before each lecture.

Laboratory Assignments
There will be five laboratory assignments, which will make use of the OS/161 educational operating system running on a simulated MIPS R3000 computer called System/161. The simulators, which were developed at by the Systems Research group at Harvard, are relatively platform independent (OS/161 and System/161 run on Unix as well as Windows systems). Assignment solutions will be submitted in C code.

Late Assignments
Late assignments will NOT be accepted without prior arrangement.

Cheating
Assignments 0 and 1 have to be done individually, whereas Assignments 2 and 4 are completed in teams of three. Students may discuss with their friends about general approaches to solving problems and writing programs. Students in different groups should not share program code. Please do not attempt to recycle code from the Internet (plagiarism). Any instance of suspected cheating or plagiarism will be referred to student judicial affairs.