

# Syllabus for COMP-SCI 5531 (Fall '08)

**Instructor:** Praveen Rao  
*Department of Computer Science & Electrical Engg.*  
*University of Missouri-Kansas City*

August 19, 2008

**Course Number/Title:** COMP-SCI 5531 - *Advanced Operating Systems* (3.0 units)

**Lecture Time:** Tuesdays and Thursdays, 12.30 pm - 1.45 pm

**Location (Bldg, Room):** HH 00307

**Instructor:** Praveen Rao (Email: [raopr@umkc.edu](mailto:raopr@umkc.edu), Phone: 816-235-2705,  
Web page: <http://r.faculty.umkc.edu/raopr>)

**Office Hours/Location:** 2.00 pm - 3.00 pm, Tuesdays and Thursdays, or by appointment - FH 550H

**Course Description:** This course will cover concepts in modern operating systems design. The topics will include memory management, process management, synchronization, file systems, IO, remote procedure calls, and security. Recent advances in computing (e.g., peer-to-peer systems, multicore processors, virtualization) will also be covered in this class. Grades will be based on exams, written assignments, class participation, and a programming project. Extensive reading of research papers is a core part of this class.

**Pre-requisites:** Undergraduate operating systems, and familiarity of developing code in C/C++ on unix/linux based systems. Knowledge of tools such as make, gdb etc. will be required.

**Texts:** There are no required text books for this class. However, the following text(s) may be helpful:

- Operating System Concepts by Silberschatz, Galvin, and Gagne
- Modern Operating Systems by Andrew Tanenbaum
- Advanced Programming in the UNIX Environment by Richard Stevens

**Grading Policies:** Letter grades will be assigned based on your cumulative performance in the written assignments, class participation, midterm exams, and the programming project. The weightage of each is given below.

- Written assignments on research papers - 25%
- Class participation - 10%
- Two midterm exams - 30%
- Programming project - 35%

Late submissions of assignments/project will be given **NO** credit. Partially complete work but submitted on time will receive some credit. There will be no make-up exams except under extreme circumstances (e.g., medical emergency). The dates for the exams will be announced on Blackboard.

Check [www.umkc.edu/registrar](http://www.umkc.edu/registrar) for dates regarding class add/drop/withdraw.

**Written Assignments:** These will consist of writing short reports on research papers by describing three strong points and one weak point of each paper. The schedule for reading papers will be posted on Blackboard. (The plan is to have one paper per week.)

**Class Participation:** You are expected to ask questions in class, participate in discussions etc.

**Midterm Exams:** There will be 2 closed-book midterm exams during this course. The dates will be announced in advance on Blackboard. Each exam carries 15% of your grade and will last for a duration of 75 minutes each.

**Programming Project:** This project will be performed in groups of three students. The project will involve design, implementation, and evaluation of a simple file system over the Chord distributed hash table framework. The details will be posted on Blackboard.

**Announcements:** Blackboard is the best way for me to communicate to the class. I will regularly post announcements – **so please check Blackboard everyday.**

**Attendance:** You are expected to attend all classes. You are responsible for all materials covered in class whether you are in attendance or not.

**Disability, Academic Dishonesty:** Refer to UMKC catalog. Academic dishonesty is taken as a serious offence. Refer to UMKC catalog for information.

**Student Conduct Code:** <http://www.umkc.edu/umkc/catalog/html/append/policy/0020.html>

**Caveat:** This syllabus is subject to changes during the course of the semester. Whenever possible, the changes will be announced in class before this document is updated and uploaded on Blackboard.