CS 342 Operating Systems - Spring 2007
Course Syllabus

Please note that if there is a difference between the information in this syllabus and the information posted on the website, you should take the information on the website as the correct one. The website will always include the most up-to-date information.

Description: Introduction to Operating Systems; Operating System Structures; Processes; Threads; CPU Scheduling; Process Synchronization; Deadlocks; Main Memory Management; Virtual Memory; File System Interface, File System Implementation; Mass-Storage Structure; I/O Systems; Protection and Security.
Credits: 4
Prerequisites: CS 101 and CS 224.
Class Hours and Rooms:

	Mon	Tue	Wed	Thr	Fri
8:40		1 (203)			3/4 (203/204)
9:40		1 (203)			3/4 (203/204)
10:40		3/4 (203/204)		1 (203)	
11:40		3/4 (203/4)		1 (203)	
12:40					
13:40		2 (203)			
14:40		2 (203)			
15:40				2 (203)	
16:40				2 (203)	

Sections 1, 2, 3 will meet in Room EB203
Section 4 will meet in Room EB204
Instructors:

- *İbrahim Körpeoğlu*, Sections 1, 2, 3; Office EA-408, Tel: 2599
  Email: korpe AT cs.bilkent.edu.tr
- *William Sawyer*, Section 4; Office: EA-429, Tel: 3398
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Teaching Assistants:

- *Berk Berker*, EA-434, Tel: 2163, Email: berker AT cs.bilkent.edu.tr
- *Eyüphan Bulut*, EA-434, Tel: 2163, Email: eyuphan AT cs.bilkent.edu.tr
- *Emine Büşra Çelikkaya*, EA-434, Tel: 2163, Email: busra AT cs.bilkent.edu.tr
- *Gökçe Görbil*, EA-434, Tel: 2163, Email: ggorbil AT cs.bilkent.edu.tr

Course website: http://www.cs.bilkent.edu.tr/~korpe/courses/cs342spring2007/
Make sure to visit the web site quite frequently. Important information and announcements will be posted there. It is your responsibility to read the website and the announcements.
Required Textbook: *Operating Systems Concepts*, by Abraham Silberschatz, Peter Baer Galvin, Greg Gagne, Seventh Edition, John Wiley & Sons, 2004, (www.os-book.com)
Supplemantary Textbook: *Modern Operating Systems*, by Andrew S. Tanenbaum, Second Edition, Prentice Hall, 2001.
Recommended Programming Books:

- *The C Programming Language*, by Brian W. Kernighan and Dennis M. Ritchie, Prentice Hall PTR, 1998 (must have book for serious C programmers).
  You should buy this book.
- *Advanced Programming in the UNIX Environment*, W. Richard Stevens, Addison-Wesley, 1992.

- *Unix Network Programming*, Volume 1, W. Richard Stevens, Networking APIs: Sockets and XTI, Second Edition, Prentice Hall PTR, 1998.
- *Unix Network Programming*, Volume 2, W. Richard Stevens, Interprocess Communications, Second Edition, Prentice Hall PTR, 1998.
- *The Unix Programming Environment*, by Brian Kernighan and Rob Pike, Prentice Hall Computer Books, 1984 (for the first beginners to Unix)
- *The Practice of Programming*, by Brian Kernighan and Rob Pike, Addison Wesley, 1999.

Tentative Lecture Schedule:

	Mon	**Tue**	**Wed**	**Thu**	**Fri**	**W#**	**Topic**
JAN/FEB	29	30	31	1	2	**1**	Introduction; Operating System Strructures
FEB	5	6	7	8	9	**2**	Processes and Threads
FEB	**12**	13	14	15	16	**3**	Processes and Threads
FEB	19	20	21	22	23	**4**	CPU Scheduling
FEB/MAR	26	27	28	1	2	**5**	Process Synchronization
MAR	5	6	7	8	9	**6**	Process Synchronization and Deadlocks
MAR	12	13	14	15	16	**7**	Deadlocks
MAR	19	20	21	22	23	**8**	Main Memory Management
MAR/APR	26	27	28	29	30	**9**	Virtual Memory
APR	2	3	4	5	6	**10**	File System Interface
APR	9	10	11	12	13		
APR	16	17	18	19	**20**	**11**	File System Implementation
APR	23	24	25	26	27	**12**	Mass Storage Structure
APR/MAY	30	1	2	3	4	**13**	I/O Systems
MAY	7	8	9	10	11	**14**	Protection and Security
MAY	14	15	16	17	18		
MAY	21	22	23	24	25		
MAY	28	**29**	30	31			

Grading Policy (tentative)
Quizzes: 10 - 15 %
Homeworks: 10 - 20 %
Projects: 30 - 40 %
Midterm: 20 - 25 %
Final: 20 - 25 %

Attendance: You should attend the lectures. Depending on the instructor, attendance may be monitored.

Quizzes: There will be pop-quizzes.

Homeworks: There will be homework assignments that may include programming and problem solving.

Projects: There will be programming projects. The number of projects is expected to be 4 or 5. Projects are very important. They will be developed using C language and in Linux operating system. In projects, every student should perform above a threshold percent grade in order to pass the course. The threshold will be clear at the end of the course. Therefore, make sure that you spend serious effort to do the projects.

Academic Honesty: You are expected to study, learn, practice, and enhance your skills, and in this way prepare yourself for professional life. This is an excellent opportunity. You are not expected to cheat. If you cheat you will miss this opportunity. Additionally, cheating will not be tolerated and will be heavily penalized.