Computer Science 5204
Operating Systems
Fall, 2005

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Class Web Page: http://courses.cs.vt.edu/~cs5204/fall05-kafura

Prerequisites:

   This is an introductory graduate level course. It is assumed that each student has taken an
   undergraduate course in operating systems (equivalent to CS 3204) or has equivalent knowl-
   edge of the basic subject matter of operating systems through course work or practical expe-
   rience. Prerequisite knowledge in operating systems is operationally defined by the
   following materials:

       Operating Systems (H.M. Deitel) Chapters 1-10
       Operating Systems Concepts (J. Peterson, a. Silberschatz) Chapters 1-10.
       Operating Systems Concepts (A. Silberschatz, P. Galvin) Chapters 1-9.
       Operating Systems (W. Stallings) Chapter 1-8.
       Modern Operating Systems (A. Tanenbaum) Chapters 1-6.

   Knowledge is also assumed of basic concepts in data structures, programming languages,
   and computer architecture.

Textbook: Distributed Systems: Principles and Paradigms (Tanenbaum and van Steen)

Grading:

First Exam	100 points	Tuesday, September 20, 2005 (in class)
Second Exam	100 points	Tuesday, November 1, 2005 (in class)
Final Exam	150 points	To be determined.)
Problem Sets	100 points	as assigned

Honor Code: All work is conducted under the rules of the university Honor Code. This code and
            other relevant policies are described in detail on the class web pages.

Section	Topic	Date
1. Course Introduction		Tuesday, August 23
1. Interaction	2. Remote Invocation	Thursday, August 25
	3. CSP	Tuesday, August 30
	4. Tuple Spaces/Events	Thursday, September 1
	5. Threads	Tuesday, September 6
	6. Polyphonic C#	Thursday, September 8
	7. Mobile Agents	Tuesday, September 13
	8. Distributed Scheduling	Thursday, September 15
9. **First Examination**		Tuesday, September 20
2. Security	10. Access Control	Thursday, September 22
	11. Cryptographic Security	Tuesday, September 27
	12. Authentication	Thursday, September 29
	13. Authorization	Tuesday, October 4
	14. Kerberos	Thursday, October 6
3. Ordering	15. Event Ordering	Tuesday, October 11
	16. Message Ordering	Thursday, October 13
	17. Snapshots	Tuesday, October 18
	18. Transactions	Thursday, October 20
	19. Two-phase lockingq	Tuesday, October 25
	20. Timestamp ordering	Thursday, October 27
21. **Second Examination**		Tuesday, November 1
4. Fault Tolerance	22. Consistency Models	Thursday, November 3
	23. Consistency Protocols	Tuesday, Ovember 8
	24. Two-phase commit	Thursday, November 10
	25. Checkpointing	Tuesday, November 15
5. Naming/Data	26. Naming	Thursday, November 17
	27. NFS	Tuesday, November 29
	28. CODA	Thursday, December 1
	29. P2P Filesystems	Tuesday, December 6
30. **Final Examination**		TBD