CS5523: Operating Systems

Basic Information
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Course Objectives:
• Enhance the understanding for the key operating system concepts (such as process, thread and memory management);
• Develop an understanding of distributed systems and the important issues in their design;
• Develop a working knowledge of the infrastructure required to support distributed systems (inter-process communication and internet);
• Understand how applications are evolving to use distributed system support;
• Improve system-development and technical writing skills;
• Learn and/or improve team work and oral discussion skills;

Topics:
Process and memory management: SGG Chapters 3, 5, 8, and 9
Thread and Synchronization: SGG Chapters 4, 6 and 7; and TS Chapters 3 and 6
Distributed System models: TS Chapters 1 and 2
Networks and communication: TS Chapter 4 (and CDK Chapters 3 and 4)
Distributed Objects: TS Chapter 10 (and CDK Chapter 5)
Name Services: TS Chapter 5
Fault Tolerance: TS Chapter 8
Security: TS Chapter 9
Distributed File Systems: TS Chapter 11
Advanced OS Topics (if possible)

Text Books:
–Required textbooks: (1) Distributed Systems: Principles and Paradigms, 2nd edition. by Andrew S. Tanenbaum and Maarten Van Steen (TS); (2) Operating System Concepts, by Silberschatz, Galvin and Gagne (SGG);
–Recommended textbooks: Distributed Systems: Concepts and Design 4th ed. by G. Coulouris, J. Dollimore and T. Kindberg (CDK);

Prerequisites: (1) CS 3733 or equivalent: Undergraduate operating systems; (2) CS 4753 or equivalent: Undergraduate architecture; (3) Graduate standing or granted before;
Grade Policy:

- First Midterm 15%
- Second Midterm 15%
- Final 30%
- Projects & Assignments 30%
- Quizzes 10%

Final Grade Distribution:

\[
\begin{array}{c|c|c}
\text{>= 96.00} & \text{A+} & \text{73.00 - 76.99} \\
93.00 - 96.00 & A & 70.00 - 72.99 \\
90.00 - 92.99 & A- & 67.00 - 69.99 \\
87.00 - 89.99 & B+ & 63.00 - 66.99 \\
83.00 - 86.99 & B & 60.00 - 62.99 \\
80.00 - 82.99 & B- & 57.00 - 59.99 \\
77.00 - 79.99 & C+ & 53.00 - 54.99 \\
\text{<= 59.99} & F & \\
\end{array}
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Course Policies:

- **General**
  
  - Exams are closed books, closed notes.
  
  - No makeup will be given except with university sanctioned excuses.

- **Project Assignments**
  
  - Project assignments should be finished independently but can be discussed. **Borrowing** and **providing** solutions are considered to be plagiarism and will be reported. Also, they will result in a **FAIL** in this course.
  
  - No late submission of projects will be accepted **except with prior instructor consent**.

Common Syllabus Information:

http://provost.utsa.edu/syllabus.asp

Common Questions about the course, assignments or exams:

Please post those questions in the “HelpForum” of Blackboard system since other students may have similar questions. It is not efficient to answer those questions one by one. However, you are welcome to send me personal questions, where the rule is further discussed in the following.

Sending Emails:
I will receive tons of emails everyday. Thus, please put the keyword “CS5523” and your ABC123 in your email subject so that I can find corresponding emails very quickly. **Those emails without the keyword “CS5523” will not be answered!!**