CS3733: Operating Systems

Basic Information

Instructor: Tongping Liu
Email: Tongping.Liu@utsa.edu
Class Time: Tu/Th, 6:00pm-7:15pm
Class Room: NPB 1.202
Office: NPB 3.328
Office Hours: Tu: 1pm–4pm

Course Description:
The emphasis of the course is on process management, but we will cover Parts 1 through 4 of SGG Book along with the Linux and Windows case studies. Most of our specific examples will come from UNIX, and we will be covering most of chapters 1-8 and 18 of USP as well as some of the project chapters.

—Introduction to OS (SGG Chapter 1)
—Programs and Processes (SGG 3.1, 3.2, and USP Chapter 2)
—CPU Scheduling (SGG 5.1-5.3, 5.6)
—Processes in UNIX (USP Chapter 3)
—UNIX I/O (USP Chapters 4, 5 and 6.1-6.4)
—The Token Ring (USP 7.1 7.3)
—Threads (SGG Chapter 4 and USP 12.1-12.2)
—Process Synchronization (SGG Chapter 6)
—POSIX Mutex and Semaphores (USP 13.1-13.2 and 14.1 14.4)
—Monitors and signals (SGG 6.7, USP 8.1-8.6, and 9.4)
—Network Communication (USP Chapter 18)
—Memory Management (SGG Chapter 18)
—Virtual Memory (SGG 9.1-9.4)

Required Text Books

• Operating System Concepts, by Silberschatz, Galvin and Gagne (SGG);
• UNIX Systems Programming, by Kay Robbins and Steve Robbins (USP);
Prerequisites:

- CS 3423 (Systems Programming)
- CS 3843 (Computer Organization)
- CS 3443 (Applications Programming)
- In order to be able to work on the programming projects, the students must be comfortable with C/C++ programming languages;
- If you have not met ALL of these prerequisites, please talk to the instructor.

Grade Policy:

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<tr>
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<th>Percentage</th>
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<tr>
<td>First Midterm</td>
<td>20%</td>
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<tr>
<td>Second Midterm</td>
<td>20%</td>
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<tr>
<td>Final</td>
<td>35%</td>
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<td>Assignments &amp; Recitation</td>
<td>24%</td>
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<tr>
<td>Evaluation</td>
<td>1%</td>
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Notes on participation: The attendance and active participation is required for this course. Course evaluation will be 1 point.
For people with a full attendance, your final score will be multiplied by 10% in the end. For people attending more than 90% classes, your final score will be multiplied by 5%. For people attending more than 80% classes, your final score will be multiplied by 1%.

Final Grade Distribution:

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<thead>
<tr>
<th>Grade Distribution</th>
<th>Letter Grade</th>
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<tbody>
<tr>
<td>&gt;= 96.00</td>
<td>A+</td>
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<tr>
<td>93.00 - 96.00</td>
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<td>90.00 - 92.99</td>
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<td>87.00 - 89.99</td>
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<td>83.00 - 86.99</td>
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<td>80.00 - 82.99</td>
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<td>77.00 - 79.99</td>
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<td>&lt;= 59.99</td>
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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**
  - You will expect to have four or five project assignments. Project assignments should be finished independently but can be discussed. Both “borrowing” and “providing” solutions are considered to be plagiarism and will be reported. Also, they will result in a FAIL in this course.
- Assignments can turn in two days late, but with a 30% off. After two days, we will not accept the assignment.
- Every one will get a chance to turn in the project late without punishment in the whole semester.

**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 “CS3733” and your ABC123 in your email subject or body so that I can find corresponding emails very quickly. **Those emails without the keyword “CS3733” will not be answered!!**