


CSCI 4730 / 6730: Operating Systems

Course Overview



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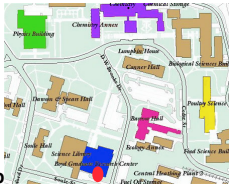
Short Term Plan

- Today go over expectations and course plan
- Tuesday discuss presentation topics & some advice

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Administration / Logistics

- Who am I?
 - » Office: Boyd 219C
- Class:
 - » Boyd 306
 - » Hardman 102
- maria@cs.uga.edu
- Office Hours: W 3:30-5:00 p
 - » And by e-mail appointment
- TA: TBD - check class web page for updates...



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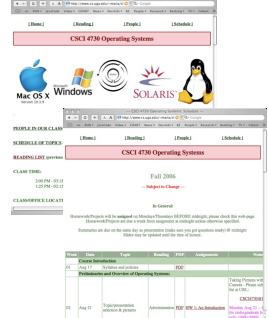
Communication

Web Page:

- <http://www.cs.uga.edu/~maria/classes/4730-Fall-2009/schedule.html>
 - » Check often
- Your Responsibility
 - » Understand policies, honor code
 - » Work independently on projects/hw
 - » Check page often for updates
 - » HW, Projects, Deadlines

Email list:


- Will set up (see web page for update)



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Course Objective

- Know and understand fundamental issues of operating systems
 - » Processes
 - Communication: Socket programming
 - » Threads
 - » Synchronization & Deadlock
 - » Memory Managements & Virtual Memory
 - » File Systems
 - » I/O System
 - » Mass Storage
 - » More.... Tune your programming skills and understanding – resume building - simulation practice gives you – versatility, internet games, entertainment
 - Why learn programming when you can get a gorilla to do it for you? [BONUS :)]





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Beat the Competition



How we're going to do it

- **Read & Listen**
 - » "Operating Systems Concepts," 8th Edition, Silberschatz, Galvin, Gagne (or later edition).
- **Practice**
 - » 3-6 programming assignments
 - » Mini-Conference Technical paper presentations & summary.
 - Learn how to read/skim papers
 - present & listen to your peers
 - Learn how to make a nice presentation - friendly environment
- **Test**
 - » 2 Midterms, 1 Final, Quizzes

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How to get an A? B? C?... F?

- **Theory 40%**
 - » 2 Exams (10% each) + Final 15% + Quizzes 05% = 40%
- **Practice 55555555 (or 55%)**
 - » 9-11 homework (10%) & summaries (15%) & presentation (10%) & programming assignments (20%) & session chairing (HW)
- **Participation 5%**
 - » 100% attendance will **raise your final grade by 2%**
- **Grading (below 60 F)**

90-92	A-	Grading (below 60 F)
87-89	B+	67-69 D+
83-86	B	63-66 D
80-82	B-	60-62 D-
77-79	C+	
73-76	C	
70-72	C-	

Expected Effort: 3-4 hours per credit hour per week
 12-16 hours per week

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Policy on Collaboration

- **Assignments/projects/summaries:**
 - » Purpose: familiarization of concepts and details of operating systems
 - » Work on project independently:
 - No Direct Sharing of code
 - No line-by-line assistant
 - No exchange of code
 - » You are encouraged to ask questions of one another, and to respond to other student's questions (and especially on the email list)
- **Exams:**
 - » Closed-book. No outside assistance is permitted. No additional materials may be used.
 - » No make-up tests unless absence is due to **serious** illness. Doctor's diagnostic note is required. The final grade will be scaled accordingly.

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Paper Presentations

- **1-2 presentations will be expected.**
- **We discuss topics tomorrow (via sign up or assignment)**
 - » Caveat: If someone sign up for a paper and then later drops, we may need to shift the last scheduled person to the empty slot(s) (other volunteers are welcomed and will be solicited in class).
- **Format:**
 - » Mini-conference / talkfest
 - » 3 Presentations – 10 minutes long (about 10-15 slides)
 - Core topics
 - » 3 Session-Chairs (with prepared questions)

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Paper Summaries

- **One page summary of an assigned technical paper -- need to reflect that you understand the paper and its contribution(s) to the area:**
 - » What is the problem that the authors are trying to solve?
 - » What is their approach and how is it original?
 - » What are the assumptions/limitations?
 - » What are the results/impact of paper (Why is this paper important)?
 - » What constructive criticism can you give to the presenter (e.g., would should have been included/excluded)? Do not discuss presentation style of speaking, comment on 'content' of talk and possibly organization.
- See for latest bullets point on reading list web page

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Tentative projects for class

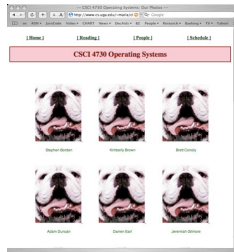
Tentative Plan:

- Simple shell/interpreter
- A Gentle MINIX Kernel Hack
- Modify the MINIX Scheduler (RT process)
- Synchronization/Threads : Implement Semaphores in MINIX
- Virtual Memory in MINIX
- File Server for MINIX

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Homework 1

- See schedule for details...
- Digital Image -- How to get out of the dog pound (and improve your grade).



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Schedule of Topics

See Handout - Subject to Change

Please check web page often

Subscribe to email list (when set-up)

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Contributors

- Tidbits & Material are drawn from several resources:
 - » Book Authors:
 - Avi Silberschatz, Peter Baer Galvin and Greg Gagne
 - Andrew S. Tanenbaum, Vrije Universiteit
 - William Stallings
 - Deitel & Deitel's OS Book
 - Many More...
 - » Other Instructors & Colleagues:
 - Andrea & Remzi Arpaci-Dusseau, University of Wisconsin
 - Andy Wang, (UCLA) now Florida State University
 - Fred Kuhns, Washington University
 - Jeff Donahoo, Baylor University (TCP/IP and sockets)
 - List is growing see syllabus for more
 - » Students Feedback

Maria Hybinette, Wikipedia (Yes! It is becoming quite nice)

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Quiz & Introductions

Please turn in on note book paper:

Please tell us:

- Name, major, year?
- What are you hoping to learn from the class?
- What type of projects are you interested in?
- What do you want to do when you graduate?
- Do you have C programming experience?
- What about C++?
- List the OSs that are familiar to you?

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