

## 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](mailto: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 :)]

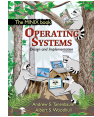
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## Beat the Competition

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## How we're going to do it

- **Read & Listen**
  - » "Operating Systems Concepts," 8<sup>th</sup> 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

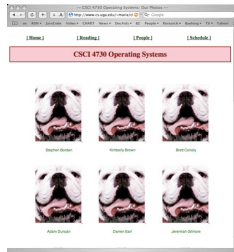
- Tentative Plan:**
- Simple shell/interpreter
  - A Gentle MINIX Kernel Hack
  - Modify the MINIX Scheduler (RT process)
  - Synchronization/Threads : Implement Semaphores in MINIX
  - Virtual Memory in MINIX
  - File Server for MINIX

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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

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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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