How this class is organized

- **Who’s Who**
- **Before you take this class…**
- **Lecture**
- **Getting Help**
- **Grades & Policies**
Who am I?

- Ph.D. C.S., Vrije Universiteit Amsterdam
  - Amoeba Distributed Operating System
- Industry: Research Scientist @ AT&T Bell Labs
  - Unix, Plan 9
- Chair ACM SIGOPS, ACM Fellow
- member/coach Original Cornell Syncopators

Interests: scalable and fault tolerant distributed systems
Non-geek: musician, unicycle, dance
Who are the TAs?
Who are you?
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Prerequisites

- CS 3410, CS 3420 or equivalent required

- Otherwise: you must contact the instructor, explain your situation and request permission.
Required Textbook

- Free online
- Buy a PDF or a printed version

OPERATING SYSTEMS
THREE EASY PIECES

REMZI H. ARPACI-DUSSEAU
ANDREA C. ARPACI-DUSSEAU
UNIVERSITY OF WISCONSIN–MADISON
Lectures

- Tues/Thurs 2:55-4:10pm, Uris G01

- Electronics policy
  - *No cell phones anywhere, ever*
  - No laptops (except occasionally)
  - Studies show that such classrooms without laptops are far more effective

- Please ask questions!
  - Save private discussions for later
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  • Office Hours
  • Online Tools
• Grades & Policies
Office Hours

• Professor Van Renesse:
  • Mon 11-noon, Wed 2:30 – 3:30
  • Gates 433

• Course Staff
  • Lots of great TAs this semester (website)
  • OH weekdays 10am-10pm-ish
Online Resources

**Webpage:**  http://www.cs.cornell.edu/courses/cs4410/
- Schedule, exam & due dates
- Lecture notes
- Mostly static

**Github for code:**  https://github.coecis.cornell.edu

**CMS for assignments:**  https://cmsx.cs.cornell.edu
- Autogrades, Grades, & Regrades

**Gradescope for exams**
- Grades & Regrades
Online Help

Web page

Piazza

• For 99% of the communication
  • Private posts should be visible to all course staff
  • Do not contact staff by other means (FB, texts, etc.)
• For help with assignments, concepts

cs4410-staff@cornell.edu: time sensitive matters
• Goes to Professor Van Renesse & staff leads

cs4410-prof@cornell.edu: sensitive matters
• Goes to Professor Van Renesse

Please no emails to personal email accounts
## Other Resources

<table>
<thead>
<tr>
<th>Resource</th>
<th>Website</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering Advising</td>
<td><a href="http://www.engineering.cornell.edu/resources/advising">www.engineering.cornell.edu/resources/advising</a></td>
<td>Academic advising for engineering students</td>
</tr>
<tr>
<td>Arts College Student</td>
<td><a href="http://www.arts.cornell.edu/stu-adv/">www.arts.cornell.edu/stu-adv/</a></td>
<td>Listing of general support services for a variety of concerns</td>
</tr>
<tr>
<td>Gannett</td>
<td><a href="http://www.gannett.cornell.edu">www.gannett.cornell.edu</a></td>
<td>Cornell University Health Service</td>
</tr>
<tr>
<td>CAPS</td>
<td><a href="http://www.gannett.cornell.edu/services/counseling/caps">www.gannett.cornell.edu/services/counseling/caps</a></td>
<td>If you experience emotional distress, please contact Counseling and Psychological Services</td>
</tr>
<tr>
<td>Student Disability Services</td>
<td>sds.cornell.edu</td>
<td>Ensures that all aspects of student life are accessible, equitable, and inclusive of those with disabilities. Send accommodation letters to Veronica VanCleave-Seeley (vv48, Gates 401) by Feb 15.</td>
</tr>
</tbody>
</table>

Email cs4410-prof@cornell.edu
Get help. Get documentation. The earlier the better. Also, please look out for each other
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Course Content

Three Components

1. Lectures and Readings
2. Exams
3. Assignments

You are expected to keep up with all three
Draft Syllabus

- Introduction
- Architectural Support for OSs
- Processes and Threads (A1)
- Synchronization (A2)
- Deadlocks
- Scheduling
- Memory Management
- Virtual Memory (A3)
- File systems
- Security
- Networking
- Distributed Systems

10/4: Prelim 1
11/20: Prelim 2
12/10: Final Exam
Grading Policies

Late Policy
• Each person has a total of 4 “Slip days”
• Max of 2 slip days for any assignment
• Cannot ever submit later than 48 hours late
• I really do not budge

Regrade policy
• Within 1 week of assignment (or exam)’s return
Homework

- 3 programming assignments
  - build a “shell”
  - “easy” synchronization problems
  - “hard” synchronization problems

- 4 or so reading assignments
  - easy but seminal papers in systems
  - together counts as much as a programming assignment
Practicum: CS4411

- Little programming in CS4410
- In CS4411, you’re going to have hands-on C development experience with an almost-real operating system: EGOS
  - Write a queue
  - Write a threading package
  - Write a scheduler
  - Write a file system cache
  - Write a file system
- Teams of two programmers
Semester Grades

40% Assignments, 10% each
55% Exams (best 2 of 3)
5% Altruism Points

- Goal is to give everyone an A
- Help us achieve this
Altruism Points

Once this semester, contribute to the education of your fellow class members

Examples (be creative!):

- Helpful & Thoughtful post on piazza
- Elite Piazza answerer
- Make a video that explains a concept
- Good explanation of a practice exam question
- Share code that illustrates a cool concept
- Research something left unanswered
- use alt tag on piazza when possible
Academic Integrity & Honor Code

Closed-book exams, no calculators/phones
All submitted work must be your own
• OK to discuss concepts together
• White/black board rule (work, erase, wait, code)
• Cannot be in possession of other’s solution
• Do not look at code that is not yours
  – a friend’s or online

Violations will be prosecuted
First reading assignment

• Due next week
• Write 200-300 word report
  • what did you like/learn?
  • what did you dislike (or didn’t understand)?