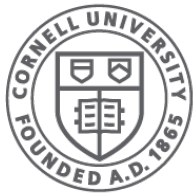


Administrivia

CS 4410: Operating Systems
Spring 2024

Professor Robbert van Renesse



Cornell CIS
COMPUTING AND INFORMATION SCIENCE

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Inclusion

- We strive to make CS4410 a welcoming, safe, equitable, and respectful environment, consistent with [Cornell's commitments](#)
- We recognize that the society we live in is none of those things, that we have implicit biases, and that we have to work hard every day to counter those biases to create an inclusive environment
- If you witness a bias incident or have been the victim of one, please file a [confidential report](#) with Cornell
- If you have any suggestions such as improvements to the web site, syllabi, slides, homework and exam questions, and so on, you can email cs4410-prof@cornell.edu.

Emotional Help

Cornell Health	https://health.cornell.edu/services/mental-health-care	Cornell University Health Service
Student Disability Services	sds.cornell.edu	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 Sep 15.

Get help. Get documentation. The earlier the better.
Also, please look out for each other

How this class is organized

- Who's Who
- Before you take this class...
- Communication
 - Lectures, OHs, FAQ, etc.
 - Getting Help
- Homework, exams

About RVR

- Ph.D. C.S., Vrije Universiteit Amsterdam
 - Amoeba Distributed Operating System
- Industry: Research Scientist @ AT&T Bell Labs
 - Unix, Plan 9
- Serial entrepreneur
 - Reliable Network Solutions (IP → Amazon)
 - D.A.G. Labs (acquired by FAST, then by Microsoft)
 - Exostellar (ongoing)

Interests: scalable and fault tolerant distributed systems

Non-geek: musician (trad. jazz), swing dance, unicycling

Who are the TAs?

Aaron Ye

Abhijeet Saha

Andrew Cheng

Barry Wang

Cameron Goddard

Christy Song

Elise Song

Emily Zhang

Jacqueline Wen

Jessica Ip

Jorge Tapias Gomez

Joseph Ugarte

Lisa Li

Marta Liang

Michael Wei

Nikita Kasumov

Peter Huo

Rohit Valiveti

Sanjit Basker

Seth Norman

Shreehari Srinivasan

Stanley Jiang

Stephanie Lu

Steven Long

Tucker Stanley

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Prerequisites

- CS 3410, CS 3420 or equivalent required

Otherwise: you must contact an instructor, explain your situation and request permission

Course Content

Five Components

1. Lectures
2. Reading
3. Homework Assignments
4. Programming Assignments
5. Exams

You are expected to keep up with all four

Draft Syllabus

- Introduction
- Architectural Support for OSs
- Processes and Threads
- Synchronization
- Scheduling
- Memory Management
- File systems
- Networking (local only)
- Security

Required Textbook

**OPERATING SYSTEMS
THREE EASY PIECES**

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

- Free online
- Buy a PDF or a printed version

Also: RVR's book

Concurrent Programming with Harmony

Robbert van Renesse
Cornell University

- Free online
- Free PDF download, or read online

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- **Communication**
 - Lectures, OHs, FAQ, etc.
 - Getting Help
- Homework, exams
- Grades & Policies

Communications

- Web page
- Lectures
- Ed Discussion
- Office Hours
- CMSX

Course Web Page

`http://www.cs.cornell.edu/courses/cs4410/`

- Schedule, exam & due dates
- First homework assignment posted on web page
- Homework release and due dates
- Slides posted before each lecture

Let's have a look around at the [web site](http://www.cs.cornell.edu/courses/cs4410/)

CMSX

<https://cmsx.cs.cornell.edu>

- Assignments
- Grades & Regrades

Lectures

- Tues/Thurs 10:10-11:25pm, live
- No recording

Office Hours

- Slots will be posted online
- *Starts next week*
- Evenings/weekends probably on Zoom

Ed Discussion

- Anonymous to other students, but not anonymous to us
- Ask anything you want, but do not share code unless posted privately to staff
- Provide peer-to-peer help
 - Each student should feel safe, welcome, respected
 - Respect diverse talents and ways of learning

Email

cs4410-staff@cornell.edu: **time sensitive** matters

- Goes to professors & TAs

cs4410-prof@cornell.edu: *sensitive* matters

- Goes to RVR only

Please no emails to personal email accounts

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Homework

- Assigned approx. once every other week
- Individualized, fillable PDFs
 - (slight) randomization of problem parameters, multiple choice questions, etc.
 - Fully auto-graded (no TAs involved)
 - Regrade requests due within a week
- 2 slip days / assignment
- Max. 6 slip days total
- Your “worst” homework is dropped
 - this does not apply to programming assignments

Homework 1 due Saturday!

- Posted on CMSX and on course web site
- Must be submitted on CMSX
 - request an account (but not today)
 - however, having an account on CMSX does not mean you've been enrolled

Programming Assignments

- three different concurrent programming assignments
- work in groups of 2 or 3 students, or do it by yourself if you prefer

Group Code of Conduct

- Each student should feel safe, welcome, respected
- *Participate, but don't dominate*
- Be patient
- Respect diverse talents and ways of learning
- Fight your implicit biases

A well-run team benefits **all** participants

Academic Integrity & Honor Code

All submitted code must be your own

- Different groups are not allowed to share code
- OK to discuss concepts with any other students

Violations will be prosecuted

Exams

- 2 prelims (March 12, April 23), 1 final (mid May)
 - make-up and exam are back-to-back
 - no other make-up exams
 - best two out of three
 - all exams weighed the same
 - Exam questions are versions of homework questions
 - Includes questions about lectures, homework, books
- Cumulative
- Regrade requests due within a week

Academic Integrity

Why not cheat?

- It hurts you in various ways:
 - It reduces the value of your Cornell degree
 - It stresses you out because you might get caught
 - You won't feel good about yourself afterward
 - The energy that goes into cheating is better used for learning (studying for the exams)
 - High-risk, low reward
- It hurts other students:
 - It stresses them out

If you need help, get it early

Semester Grades

15%	Homework Assignments
30%	Programming Assignments
55%	Exams (best 2 out of 3)

- No “curving”
 - CS4410 is not a competition
 - Your grade reflects your learning objectives, not how well you did compared to others
 - Goal is to give everyone an A
- Weighing of individual assignments TBD