Administrivia

CS 4411/5411: Operating Systems Practicum
Fall 2025
Robbert van Renesse
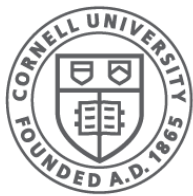
Inclusion

- We strive to make CS4411/5411 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, programming assignments, and so on, you can email cs4411-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

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

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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

Teaching Assistants

Ethan Narang

Omar Eqbal

Sebastian Jean-Francois

Yacqub Mohamed

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Prerequisites

- You should either have taken CS4410/5410 or take it concurrently
  - CS4414 is acceptable as well

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

Course Content

- This is a project course
  - Lectures/discussions on each Friday morning
  - Approx. 6 (CS4411) or 7 (CS5411) projects in C
    - priority queue
    - multi-threading and synchronization
    - system calls and memory protection
    - caching
    - file system
    - paging?
  - No exams, no textbook

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- Grades & Policies

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Communications

- Website
- Office Hours
- CMSX
- Ed Discussion
- Email

Course Web Page

`http://www.cs.cornell.edu/courses/cs4411/`

- Schedule
- Office Hours
- Resources

CMSX

`https://cmsx.cs.cornell.edu`

- Assignments, releases, deadlines, etc.
- Grades & Regrades
  - Do not ask for regrades on Ed Discussion
- 2 slip days per assignment
  - 6 slip days total maximum unless SDS accommodation

Email

For time-sensitive matters, email
cs4411-staff@cornell.edu
(goes to course staff)
For sensitive-matters, email
cs4411-prof@cornell.edu
(goes only to prof)

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Project Teams

- Each project (except the first) must be done in teams of 2 to 3 students
  - You can select your own team
  - Or you can let us do it
  - Aim to have this done in next two weeks
    - queue project must be done individually
    - we can spend a little time after class trying to do the matching

Team 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 work must be your own

- OK to discuss concepts with any other student
- Teams are not allowed to share code
- One submission per team
- Put your code in a private repo
  - recommend: github.coecis.cornell.edu

Violations will be prosecuted

Academic Integrity and GAI

- You are allowed to use GAI/LLMs, but *not* to write code
  - Why not?
- Except testing code
  - *Vibe coding test programs is allowed*
  - And, in fact, we teach it in this course
- You can use GAI for simple code completion built into IDEs

Academic Integrity

Why not cheat?
It hurts you in various ways:
- It reduces what you get out of this program
- 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
- It hurts other students:
  - it stresses them out
  - It reduces the value of a Cornell degree

by far most students are honest

If you need help, get it early

Grading

- No "curving"
  - CS4411 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
- Grade is weighted average of projects
  - Weighing of projects TBD