CPSC 315
Programming Studio

Yoonsuck Choe

People

- Professor: Yoonsuck Choe
- Teaching Assistant
  - Chien-An "Jay" Chen
- Peer Teacher
  - Jason Krezinski

Background on the Course

- Meant to be a "capstone" to the lower-level classes.
- Intention is to give **lots** of programming experience, in a team environment.
- Should be prepared for any programming assignment in upper-level classes
- Should be better prepared for industry programming jobs (internships/co-ops)

"Studio" Course

- Programming as "art," "science," "engineering."
- The idea of a studio course is to have an environment where students can practice and refine their skills
  - Your skills should markedly improve over the semester
  - You should have plenty of interaction with and feedback from the professor/TA/PT
  - Practice, practice, practice

Lectures

- We'll meet a minimum of 19 class periods (out of 28 total)
  - Expect to meet most dates at the beginning of the semester
  - Will skip lectures later in the semester and during projects
- Lectures should be helpful for your programming work

Code Construction: Where It Sits (in the waterfall model)

System Specification

Requirements Analysis

Architectural Design

Detailed Design

Coding and Debugging

Unit Testing

System Testing

Maintenance

Topics

- Programming techniques and style
- Software design principles
- Basic collaborative programming skills
- Programming tools
- Project-specific subjects

Projects

- 3 projects, each 1 month long
- Each project will be a team project
  - 4 people per team max
- Might require use of specific tools, languages, approaches
- Topics from a wide range of CS fields
  - Lectures will cover additional material

Lab

- Lab times:
  - TA demos/tools instructions
  - Q and A
  - Use as team meeting times
  - Code reviews

Code Reviews

- Might include code reviews
- Public review/comments on code/design/documentation/etc.
  - During lab or lecture times
- Programs you work on/submit will **not** be considered private, for this class
- You might be asked to present your code

Syllabus Review

- Questions?

About Teamwork

- Working in a team is a major challenge for this course (both for you and for me).
- Look up on the web for info on teamwork.
- Do not slack off. Do not monopolize.
- If you have any issues with your team's dynamic/chemistry, first try to reconcile. Report ASAP if it does not work out. Do not wait until the final project due date.

Common Mistakes

- Writing a lengthy code before compiling and running it.
- Not testing your code.
- Waiting until the last moment.
- Not being proactive.

Credits

- Most of the course material for 315 we will use (including syllabus, slides) during this semester has been developed from scratch by Prof. John Keyser.
- Assignments/project details will differ from the past semesters.
- Long Mai and Allen Hurst at Improving Enterprises provided valuable feedback.

To Do

- Download and read this article:
  - Don Knuth's Turing Award Lecture:
    - "Computer Programming as an Art"
    - http://doi.acm.org/10.1145/361604.361612
- Read textbook chapters (see weekly schedule for chapters to read each week). There will be two quizzes (online) on the reading material.