CPSC 315
Programming Studio

Fall 2011

Yoonsuck Choe

People

- Professor: Yoonsuck Choe
- Teaching Assistants:
  - Timothy Mann
  - Chris Pu

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)
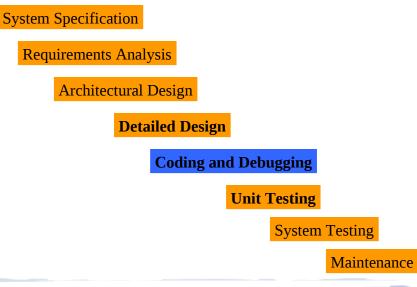

"Studio" Course

- 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
  - Practice, practice, practice

Lectures

- We'll meet a minimum of 28 class periods (out of 42 total)
  - Expect to meet most dates at the beginning of the semester
  - Will skip lectures later in semester, during projects
  - Will skip lectures when professor travels
- Lectures should be helpful for your programming work

Code Construction

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

Lab

- Lab times:
  - TA demos/tools instructions
  - Use as team meeting times
  - Use as instructor meeting times
  - Code reviews

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?

To Do

- Try out the calculator exercise (individual effort, not to be graded).
- Download and read this article:
  - Don Knuth's Turing Award Lecture:
    - "Computer Programming as an Art"
    - http://doi.acm.org/10.1145/361604.361612
- Also see McConnell chap 2 on metaphors

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.