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

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

Code Construction

- System Specification
- Requirements Analysis
- Architectural Design
- Detailed Design
- Coding and Debugging
- Unit Testing
- System Testing
- Maintenance

Taken from Code Complete
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?

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

To Do
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.