Introductions

• Professor: Ioan Raicu
  – http://www.cs.iit.edu/~iraicu/
  – http://datasys.cs.iit.edu/

• Teaching Assistants:
  – Dongfang Zhao (dzhao8@hawk.iit.edu)
    • Office Hours Time: Tuesday/Thursday 2PM-3PM (SB237D)
  – Tonglin Li (tli13@iit.edu)
    • Office Hours Time: Thursday 10AM-11AM, Friday 12:45PM-1:45PM (SB003b)
  – Iman Sadooghi (isadooghi@iit.edu)
    • Office Hours Time: Monday/Tuesday 12:45PM-1:45PM (SB003b)
Course Overview

- This course is a tour through various topics and technologies related to Cloud Computing
- Explore solutions and learn design principles for building large network-based systems, to support compute and data intensive computing across geographically distributed infrastructures
- Discussions often grounded in real Cloud Computing systems:
  - Amazon EC2 and S3, Microsoft Azure, Google AppEngine, Eucalyptus, Nimbus, OpenStack, Google's MapReduce, Yahoo’s Hadoop, Microsoft’s Dryad, Sphere/Sector, etc
• Understand methods and approaches to:
  – Design, implement, and evaluate cloud computing systems

• Course involves:
  – Lectures, outside invited speakers, homeworks, programming assignments, and exams

• Prerequisites:
  – Required: CS450 (Operating Systems) or CS455 (Data Communication)
  – Recommended: CS550 (Advanced Operating Systems)
  – Helpful: CS542, CS546, CS551, CS570, and CS595 (Data-Intensive Computing)

• Required texts:
  – Distributed and Cloud Computing: Clusters, Grids, Clouds, and the Future Internet by Kai Hwang, Jack Dongarra & Geoffrey C. Fox
Course Topics

- Distributed System Models
- Parallel Computing
- Virtualization
- Cloud Platform Architectures
  - Amazon AWS
  - Microsoft Azure
  - Google App Engine
  - Google MapReduce / Yahoo Hadoop
  - Eucalyptus, Nimbus, OpenStack
- Service-Oriented Architectures
- Cloud Programming
- Grid Computing
- Peer-to-Peer Computing
Assignments

• Written homeworks
  – 6 assignments
  – Will strengthen the theory behind cloud computing
  – Must be completed individually

• Programming Assignments
  – 4 assignments
  – Will give hand on experience with cloud computing programming
  – Should work in teams of 2
Exams

• 2 Exams, each covering half the course content
• Exams will be individual, but students will be allowed to use their textbooks and any notes they have (on paper)
  – No electronic devices such as phones, eReaders, tables, or laptops will be allowed
  – Simple calculators can be used. Each exam will be worth 18% of the overall grade.
• Schedule:
  – **Wednesday, March 13th, 2013** from 11:25AM - 1:05PM in Life Science 111
  – **Wednesday, May 1st, 2013** from 11:25AM - 1:05PM in Life Science 111
  – Please note that they extend for 25 minutes after the usual end of class, but this should not interfere with anyone’s other classes due to the lunch period; those taking CS550 as well, the exams for CS550 will start at 1:30PM on 3/13/2013 and 5/1/2013.
• There will be no makeup exams.
Late Policy

• Assignments will be due at 11:59PM on the date they are due; there will be a 15 minute grace period

• There will also be a 7-day late pass, where students can submit late assignments without penalty
  – The late pass can be used in 1-day increments spread out over multiple assignments.
  – Any late submissions beyond the grace period and beyond the 7-day late pass, will be penalized 10% every day it is late

• Exams
  – There will not be any makeup exam; do not miss the final exam
• Written Homeworks (6): 24%
• Programming Assignments (4): 40%
• Exams (2): 36%
• We will be using the textbook *Distributed and Cloud Computing: Clusters, Grids, Clouds, and the Future Internet* by Kai Hwang, Jack Dongarra & Geoffrey C. Fox.
• Write me: iraicu@cs.iit.edu
• Call me: 1-312-567-5704
• Mailing list
  – cs553-s13@datasys.cs.iit.edu
  – http://datasys.cs.iit.edu/mailman/listinfo/cs553-s13
• Office hours:
  – **Monday:** 12:45PM-1:45PM (Sadooghi SB003b)
  – **Tuesday:** 12:45PM-1:45PM (Sadooghi SB003b), 2PM-3PM (Zhao SB019c)
  – **Wednesday:** 12:45PM-1:45PM (Raicu SB237D)
  – **Thursday:** 10AM-11AM (Li SB003b), 2PM-3PM (Zhao SB019c)
  – **Friday:** 12:45PM-1:45PM (Li SB003b)