Announcements for This Lecture (In Phillips 101 Finishing Up **Review Sessions** • Submit a course evaluation Sunday 3-5 Will get an e-mail for this Abstract classes, method frames, real & apparent type Part of the "participation

- grade" (e.g. clicker grade)
- Final, May 10th 9:00-11:30
 - Review posted tomorrow
- Conflict with Final Exam?
 - e.g. > 2 finals in 24 hours
 - Submit conflicts on CMS
- Monday 1-4
 - Arrays and loop invariants
 - Required algorithms
- Tuesday 1-4
 - Exceptions, recursion
 - Open question session

Consultant for Next Year?

CS 1130

CS 1110

- Requirements:

 - Need an A in this class
 - Will still be in Java
- Need an A in this class

• Requirements:

- Learn Python on your own
- Priority given to CS 2110 alums
- Contact Laurie Buck (buck@cs.cornell.edu)
 - Resumé of work & language experience
 - Indicate work-study elligibility

Higher Level Computer Science Courses

· Programming Languages x1xx (e.g. 1110, 2110) · Scientific Computing x2xx (e.g. 3220)

• Data Management x3xx (e.g. 3300, 4320)

 Systems x4xx (e.g. 3410, 4410)

· Computational Biology x5xx (e.g. 5540) · Graphics and Vision **x6xx** (e.g. 4620)

· Artificial Intelligence x7xx (e.g. 3758, 4700)

x8xx (e.g. 4810, 4820) Theory

 Research x9xx (e.g. 4999)

Programming Languages

- · Adv. Language Topics
 - Functional languages
 - Streaming languages
 - Parallel programming

• Language Theory

- Creating new languages
- Implementing a compiler
- **Software Engineering**
 - Design patterns
 - Architecture principles





CS 5150

Scientific Computing

• Calculus + Computing

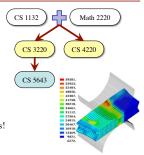
- Problems from other science domains
- Process with computer

Applications

- Complex simulations
- Physics (games!)

• Challenge: Performance

- Programs can run for days!
- How do we make faster?



Data Management

Modern Web Apps

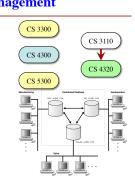
- Storing user/session data
- Coordinating users

Databases

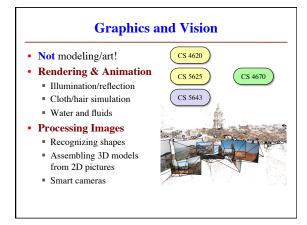
- Query languages
- Database optimization
- Organizing your data

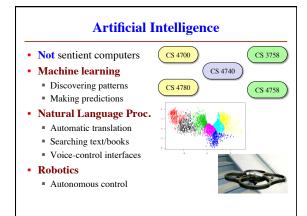
Information Retrieval

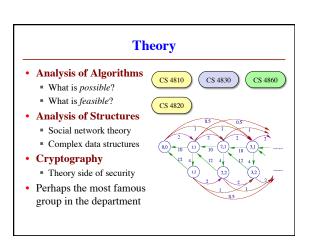
- Searching
- Data analysis



Systems • Building BIG software Operating systems CS 3410 Distributed applications (e.g. online, networked) Cloud computing CS 4410 • Also System Security CS 5412 CS 5430 Though that is spread about · Senior/masters level classes CS 5414 CS 5420 Bulk of the 5xxx courses But great project courses!







• INFO 3151 (co-meets)

Artists/designer track

Submit me a portfolio

How design effects the

user experience Fall course; no prereqs

What About Games? · CS 3152, Spring only • Prereq: CS 2110 ■ But CS 3110 a big help · Build game from scratch ■ Want it to be innovative ■ You own the IP · Interdisciplinary teams • 5 to 6 people on a team With artists/designers • Final: public showcase

