Scholarships, Honors Program, New CS Program, and What Afterwards?

Daniel G. Aliaga
aliaga@cs.purdue.edu

Spring 2010

Department of Computer Science
Purdue University
Scholarships and Funding

- Carol Paczolt, CS advisor
- Karen Wiens, CS advisor
- Jean Jackson, Manager of Corporate Relations
Honor’s Program

• Course Requirements
• Project Options
New CS Program

• Core Courses:
  – Problem Solving and Object-Oriented Programming,
  – Programming in C,
  – Foundations of Computer Science,
  – Data Structures and Algorithms,
  – Computer Architecture, and
  – Systems Programming
New CS Program

• Tracks:
  – About six courses: 2-3 required, rest electives, may include project courses
New CS Program

• “Tentative” Tracks:
  – Computer Graphics and Visualization
  – Database, Information Systems
  – Foundations of Computer Science
  – Programming Language
  – Security
  – Software Engineering
  – Systems Programming

• More details announced soon...
What about after Purdue?

• You are only just starting...but you might want to keep in the back of your mind where you are going...?

• Options for after undergraduate studies:
  – Graduate studies (MS or PhD)
  – Industry Job
    • “Programming heavy” -> systems
    • “Design heavy” -> theory++
    • “Managerial heavy” -> MBA stuff
Why go to graduate school?

• Gain specialized knowledge
• Teach and Research
• Satisfy intellectual curiosity
• Meet a challenge

• Why not to go to grad school?
  – Money
  – Less work as a professor
Master’s or Ph.D.

Jobs that benefit from a Master’s Degree:
• Software developer
• Research programmer
• Teacher at community college

Jobs that require a Ph.D:
• Professor at a university
• Researcher at industry
• Director of research, development
What is a Master’s Program

Requirements vary by school. We’ll address Purdue’s requirements.

• Usually 2 years
• 10 three credit courses or 8 with a thesis
• Practical maximum load is four courses per semester and two in the summer.
What is a Ph.D. program?

- Usually 4-6 years (including obtaining a MS)
- 9 three credit courses
- Successful completion of qualifying process
- Passage of a preliminary examination
- Successful defense of a dissertation
CS Degrees

• Despite the economy, computer science graduates are still in high-demand
• Entry-level computer science jobs pay well, as compared to many other entry-level jobs
• CRA: http://www.cra.org
  – Upward Trend in Undergraduate CS Enrollment
  – Doctoral Production Continues at Peak Levels
  – ~12000 BS per year, ~14000 declared per year
  – ~10000 MS per year, ~1500 PhD per year
What does Honors have to do with grad school or industry job?

• Grad school:
  – Working on projects and obtaining **publication(s)** gives you a key advantage for admission to top graduate school programs
  – More likely to obtain graduate assistantships

• Industry:
  – Gives you expert knowledge and a better resume
  – Publications are always good to show quality...

• In short:
  – Do a great 497 and more projects!