Undergraduate Committee Report

Buster Dunsmore

September 14, 2015

Summer 2015 Bridge Class

- Bridge Class is sponsored by the Harris Corporation (and we appreciate it!)

- This summer 63 students (52 men and 11 women)
- Our goal is to increase the percentage of women next year

- We have found that students who are comfortable in first CS course and do well in it
  - usually do well in all their other CS courses
  - usually get the Computer Science degree

- We started the Bridge Program to try to make sure that anyone who wants to can be in best position to do well in her/his first course

Summer 2015 Bridge Class

- Bridge participants this year came from 14 different states and 4 different countries

- California, Colorado, Illinois, Indiana, Kentucky, Massachusetts, Michigan, Missouri, North Carolina, New Hampshire, New Jersey, Nevada, Ohio, Oregon

- China, India, Indonesia, United States

- Best addition to Bridge Class this year was Administrator of Undergraduate Programs and Services and new Bridge Class Coordinator, Scott Nelson

Summer 2015 Bridge Class

- Scott conducted an anonymous Bridge survey a week or so ago

- 55 of the 63 total Bridge students completed this survey, response rate of 87%

- 97% of participants agreed or strongly agreed that instructors and TAs provided a safe environment to learn

- 95% of participants agreed or strongly agreed that they felt included by their Bridge peers

- Social events saw an attendance rate of 85% (with 100% attendance at the Corporate Partners Mixer)

- 98% of participants agreed or strongly agreed that they enjoyed the social events throughout the two weeks

Summer 2015 Bridge Class

- Quotes (taken from final comments or suggestions in survey):

- "The transition between home and Purdue was a little rough, but having these optional events was a really nice safety net to have. I met most of my friends at these things and it was great to not feel cooped up in my room the whole time."

- "The Bridge program took me from knowing nothing about programming to now getting through my labs and understanding CS 18000. I can't thank everyone from Bridge enough for this. I would recommend this program to everyone."

Summer 2015 Bridge Class

- "I haven't seen any other schools that provide this kind of program to keep people who would otherwise struggle a lot entering CS. It not only gave me a great foundation, but also a great group of people to rely on."

- "I really enjoyed the program! It moves very quickly, and it definitely required me to focus. However, I learned a whole lot about programming in Java and, more importantly, how to think like a computer scientist."

- "I would have liked there to have been more emphasis on the fact that Bridge is an accelerated learning course, not a "Java for Dummies"."

Current Tracks

Software Engineering (51%)

Security (14%)

Machine Intelligence (11%)

Systems Programming (8%)

Computer Graphics and Visualization (7%)

Database and Information Systems (5%)

Computational Science and Engineering (2%)

Foundations of Computer Science (1%)

Programming Languages (1%)

New Tracks?

- Cloud Computing
- Gaming
- Mobile Apps
- Entertainment Computing
- Web-Based Commerce
- Project Management

Transfer from ECE to CS

- Ease transfer from Electrical and Computer Engineering to Computer Science

- ECE students are required to take CS 15900 (C programming and Matlab)

- Possibly allow CS 15900 as a pre-requisite for CS 18200 and CS 24000 with the student taking CS 18000 later

Converting temporary courses to permanent courses

- CS 39000-CPP C++ Programming
- CS 39000-JAV Advanced Java Programming
- CS 39000-PYT Python Programming
- CS 39000-DM0 Data Mining and Machine Learning
- CS 49000-SEP Software Engineering Senior Project
- CS 49000-ES0 Embedded Systems
- CS 49000-DSO Distributed Systems

Other Issues

- Update detailed syllabi (week by week) for all our core courses

- As part of the effort above, look carefully at math pre-requisites. Some of these have not been examined for years.

- Cloud computing, Representational State Transfer (Restful) API put immediately into CS 30700