Computer Science Advisory Board

Annual Board Meeting
May 1, 2009

Department of Computer Science
College of Science and Health
Agenda

• 12:30pm – 1:15pm: Lunch
• 1:15pm – 1:30pm: Introduction
• 1:30pm – 1:35pm: Welcome Remark (Dr. Sandra DeYoung)
• 1:35pm – 2:15pm: The State of the CS Program (Dr. Cyril S. Ku)
• 2:15pm – 2:30pm: Break
• 2:30pm – 2:50pm: Discussion—Roles and Responsibilities of CSAB
• 2:50pm – 3:30pm: Discussion—Student Recruitment and Course/Curriculum Development in the Current Economic Downturn Environment
The State of The Computer Science Program

Cyril S. Ku
May 1, 2009

Department of Computer Science
College of Science and Health
WPU Facts (Fall 2008)

- Founded in 1855 (obtained university status in 1997)
- Campus size: 370 acres; 38 major buildings
- Students: 8,741 undergraduates, 1,515 graduates
- Freshman profile:
  - Number: 1,204 student
  - Gender: 51% female, 49% male
  - Ethnicity: 50% white, 20% Latino, 16% African American, 5% Asian American, 9% other
  - WPU was a top choice of 90% of first-time, first-year students
- Average class size: 20.4
WPU Facts (Fall 2008)

- 10 residence halls accommodate 2,620 students
- 1,129 full-time employees, 379 full-time faculty members
- Student to faculty ratio: 15.0 to 1
- Majors and degrees: 42 undergraduate and 22 graduate programs; 5 colleges
- Costs: $10,492 for full-time NJ residents, $17,050 for full-time non-residents; $569 per credit for graduate NJ residents, $883 per credit for graduate non-residents; room & board costs ~$9,780 per year
- 12 NCAA Division III sports teams
- 62,788 alumni in all 50 states and in 33 countries
The Computer Science Department

Present Location:

The Coach House
The Computer Science Department

Future (2011) Location:

The Science Building
The Computer Science Program

• Faculty
  – 7 full-time faculty members (fall 2009: 6 Full Professors, 1 Associate Professor)
  – 2 to 3 adjunct professors per semester

• Staffs
  – 1 secretary
  – 1 adjunct/Lab Administrator

• B.S. in Computer Science (spring 2009: 102 majors)
  – CS (Computer Science) minor: 3 students
  – CIS (Computer Information Systems) minor: 2 students
Selling Points of the CS Program

• Accredited by ABET/CAC (Accreditation Board for Engineering and Technology / Computing Accreditation Commission)
  – The following 7 CS programs are accredited in NJ: Stevens, Rowan, College of New Jersey, NJIT, Montclair State, Fairleigh Dickinson (Metropolitan Campus), and William Paterson

• Update-to-date curriculum
• Faculty excellence
• Small class size
• State-of-the-art facilities
Selling Points of the CS Program

• Undergraduate research opportunity
  – Fiber optics design research (funded by NSF, supported 6 research assistants in 2007-2008)
  – Digital signal processing research (funded by CS&H Student Workers Fund, CfR of CS&H, SURP, supported 4 students in 2008-2009)

• Publication with faculty

• Work/study opportunities:
  – Hired 7 to 8 tutors each year
  – Hired 5 to 6 lab assistants each year
  – Many students work on campus as STCs (Student Technology Consultants)

• Graduate articulation agreement with NJIT
ABET Accreditation Effort

• Re-accreditation visit in fall 2009
• ABET Ad Hoc Committee was formed to address ABET recommendations
  – Coordinated with Department Curriculum Committee and Assessment Committee
• Progress in accreditation effort – assessment and objectives
  – Revised program objectives and easily accessible on department website
  – Course level assessment instructor assessment, embedding of standardized tests, feedback from alumni survey, senior exit survey, and pre- & post-semester surveys
  – Bring course level assessment to program level assessment
ABET Accreditation Effort

- Progress in accreditation effort – assessment and objectives (cont’d)
  - Course coordination (e.g., among multi-section classes; course linkage: CS 230 – CS 240, CS 350 – CS 480)
  - Employer survey has been designed and will be implemented to measure the extent program outcomes met by graduates
  - Foundation assessment test has been designed and will be conducted as students completed CS 342 (Data Structures)
  - Document the institutionalization of assessment at the program level to the college level and to the university level
ABET Accreditation Effort

• Progress in accreditation effort - faculty
  – Course binder reviewed by Curriculum Committee for currency in the discipline
  – Avoid 4 preparations if possible
  – Increased funding for faculty travel to conferences, seminars, workshops, etc.
  – WPU ART (Assigned Release Time) program

• Progress in accreditation effort – curriculum
  – New course development in net-centric courses
  – Formation of Computer Science Advisory Board
Questions and Answers
Discussion Session

The Roles and Responsibilities of CSAB
Roles and Responsibilities

• Advise our program to achieve our mission, goals, and objectives
• Participate in our commitment to educate the next generation of computing professionals
• Provide us with the latest knowledge of current trend in the computing industry
• If possible, provide internship or make connections of internship/employment opportunities for our students
• Review and respond to our requests for industry and other academic perspectives
  – E.g., student retention plan, student recruitment strategy, assessment plans, course and curriculum development, etc.
Roles and Responsibilities

• Conduct seminars or make connections of interesting presentations for our students
• Annual advisory board meeting
  – Meet once per academic year (usually the first Friday of May)
• Please provide us with your resume for our record as part of the accreditation documentation
Discussion Session

Student Recruitment
Student Recruitment

• Student recruitment is paramount in this economic downturn environment

• Recruitment efforts
  – University open houses
  – Admitted student days
  – Scholarship student brunch
  – High school / community college guidance counselors meetings
  – Presentations at local high schools
  – Our ABET accreditation postcard has been sent to about 3,000 guidance counselors
Discussion Session

Course/Curriculum Development
Course / Curriculum Development

• New net-centric courses are being proposed based on ABET recommendation
  – CS 360 (Net-Centric Java Computing)
  – CS 399 (Computer and Network Security)
  – Computer and society (ethics course for the WPU new General Education requirements)
  – Other computer courses are being considered for the new GE initiative

• CIS (Computer Information System) major
  – Recommended by CS program reviewer
  – Proposed to be implemented in fall 2010 (WPU Academic Plan 2007-2012)