Industrial Advisory Board
Spring 2007
Welcome

Introducing today’s visitors and new members …

- Dr. Jim Barnes, Hewlett Packard
- Jon Benson, Sun Microsystems (unable to attend today)
- Dr. Brian Johnson, Ball Aerospace & Technologies Corp.
- Scott Makinen, Intel
- LeRoy Tadlock, Lockheed Martin Mission Systems
Agenda

- Department Update & Fall Action Items
- Industry Spotlight: Open-Silicon
- College of Engineering Professional Learning Institute
- Break
- CSU Economic Development and Technology Transfer
- Breakout Session I
- Student Design Presentations
- Working Lunch & Breakout Session II
- IAB Elections
- Next Steps & Closing Thoughts
Department News

- ECE ranks in the Top 10 for faculty productivity

- Update on 2007 faculty search

- Dr. Carmen Menoni named VP for IEEE-LEOS Publications

- Dr. Randy Bartels’ project funded by new bioscience grant from Colorado Office of Economic Dev. and Int’l Trade
Department News

- Laser research benefiting state
- Record attendance at 2007 Career & Internship Fair – special thanks to those who attended
- Tom Williams, EE PhD ’71 and IAB member, received European Design and Automation Association Lifetime Achievement Award
- ECE rolls out new web page, look and feel
Department News

- ABET Update: Computer Engineering re-accredited for 6 years; will go through process again in 2008 to get on track with regular renewal cycle.

- International Summer Fellowship program, a new pilot program for students from the Indian Institute of Technology (Chennai, India)
  - CSU will be hosting 8 students: 3 ME, 3 ECE, and 2 Comp Sci
Department News

Update on State Funding

- CSU working to help correct an historic inequity in how CSU has been treated in comparison to other state schools. The CCHE has allowed other Colorado schools to close their “credit hour gap” between the number of credit hours students must take to be full-time students and the number for which they pay.

- The amendment failed, which would have allowed CSU additional spending authority, with the potential action of closing the credit-hour gap.

- Colorado higher-education funding trails the average of college and university peers by more than $832 million, and CU and CSU bear the brunt of this.

- Colorado’s FTE support per student now stands at $7644, the lowest among all 50 states.
Student News

- Volunteer students coordinate and run two cajun boils, raising $2,558 for Chris Kautz Memorial Scholarship

- ECE alumnus Kate McDonnell first licensure student of Engineering Education degree program

- ECE continues emphasis on K-12 outreach, e.g., Oct. New Belgium event, collaboration with the IEEE, and FIRST Robotics

- ECE ramps up recruitment
National Enrollment Trends

[Graph showing enrollment trends for different fields from 1999 to 2004]
Trends in Freshmen Enrollment

- **CpE**
- **EE**
Undergraduate Degrees Awarded

Calendar Year

Number

1999 2000 2001 2002 2003 2004 2005 2006

BSCpE BSEE
ECE Research Expenditures

Projection for FY07

Fiscal Year
Fall Action Items

Design:
- Find ways to incorporate the design experience throughout the curriculum so that students are prepared and familiar with the program when they reach their senior year.

- **Status:** Dr. Bill Eads has integrated a mini design exercise into EE102 (Digital Circuit Logic). A similar approach is being explored for EE 251 (Intro to Microprocessors).

- Advertise senior design “labor force” to other departments as a way to build interdisciplinary projects.

- **Status:** Ed Chong, ISTeC Education Advisory Council, has been contacted. Senior design has been pitched to various industry partners as well, including Advanced Energy, Avago, Agilent, Drivven, and HP.
Fall Action Items

Communication:
- Require students to prepare a 3-5 minute presentation (elevator speech) as well as a longer, more detailed version.

  **Status:** Students were required to prepare a 10-15 minute project presentation at the end of the fall semester. Students also are expected to deliver a brief elevator speech for events such as Engineering Exploration Day, where they share their projects with a broad audience.

- Continue Best Paper Contest – ask IAB to review papers.
  
  **Status:** The contest will be held again this year. Judging begins on Mon, April 30. See Andrea if you’d like to serve as a judge. The winner will be announced at the spring grad reception.

- Ask IAB members to serve on a panel to review project presentations.

  **Status:** Six visitors from Avago, HP, and IBM attended the fall ’07 oral presentations. Will encourage continued industrial involvement.
Fall Action Items

Project Management:

- Teach students project management skills through the senior design lecture series. Bring in a speaker early in the semester and then two or three later in the semester.

  - Status: Organized 2 lectures regarding project management skills (“Building a Championship Team” and “Project Mgmt Lifecycle”). Students responded favorably.

- Investigate how to give students early exposure to senior design project management processes. Possibly have seniors mentor freshmen as part of their senior design project.

  - Status: Explicitly invited juniors to attend E Days to gain exposure to senior design. Senior design is being promoted in lower level classes. There is a College-wide effort to offer a course that gives young students research and project experience. Honors program also provides early exposure and mentoring opportunities.
Fall Action Items

Teamwork:
- Offer professional development courses to address team dynamics, e.g., team building, conflict resolution, etc.

  Status: The College requires all graduating students to attend at least two seminars from the Global Citizenship lecture series. Alma Rosales also is leading the College of Engineering Professional Learning Institute.

Multi-Year Projects:
- Consider creating more multi-year, multi-phase projects.

  Status: ECE senior Miguel Morales is developing a multi-year project in collaboration with Dr. Eads. Miguel will remain connected to the project next year in his new role at Texas Instruments. Other examples include RamBox, USAR robot, sensor networks, SimPooch/Canine Acupuncture, and the radiometer project. Olivera is always investigating additional possibilities and welcomes IAB suggestions.
Industry Spotlight: Open-Silicon

Colin Baldwin
Business Development & Technical Solutions Manager
College of Engineering Professional Learning Institute

Alma Rosales
IBM Executive on Loan
Break
CSU Economic Development and Technology Transfer

Mark Wdowik, VP, CSU Technology Transfer
Breakout Session I: Strengthening Ties Between Industry and the ECE Department

Facilitator: Hugh Grinolds, EUV ERC Industrial Liaison Officer
Considerations

- How can we further engage industry in ECE programs and initiatives?

- How can we better connect industry with students?

- How can the ECE department provide proper recognition to our most supportive industry partners?

- Other ideas
Student Design Presentations

Microwave Radiometer and Electronic Pipe Organ

Colorado State University
Working Lunch and Breakout Session II: The Future of the IAB

Facilitator: Debbie Goldman
Considerations

- What – if any – changes should be made to improve the board?

- From an industry perspective, what should be the primary roles and emphasis of the board?
IAB Elections

Debbie Goldman
Next Steps and Closing Thoughts

Tony Maciejewski