
ECE department: Margaret Cheney, Edwin Chong, Anura Jayasumana, Andrea Leland, Tony Maciejewski, Olivera Notaros, Sudeep Pasricha, Ali Pezeshki, Steve Reising, HJ Siegel, Sid Suryanarayanan, Karen Ungerer, and Peter Young.

Students: Six student teams shared demos of their ECE 202 design projects.

Guests: Torie Hadel and Jacob Sauer, Ball Aerospace; Abbie Watnik, U.S. Naval Laboratory.

1. Introduction and Welcome IAB Guests (Lance Guymon, IAB vice president)
   Lance opened the meeting by welcoming the new IAB guests (outlined above) who are considering becoming members of the board. He then turned it over to Tony Maciejewski, ECE department head, for the department update.

2. Agenda and Department Update (Tony Maciejewski, ECE department head)
   Tony reviewed the day’s agenda and delivered an update on the department, touching on the following topics.
   - 10 years of service
     - Congratulations to Warner Andrews for 10 years of service to the board
   - Faculty Accolades
     - Liuqing Yang, IEEE Fellow
     - Jade Morton, ION Fellow
   - Research News
     - ECE helps CSU gain entry into National Research Association
     - ECE researchers map sound of silence in our National Parks
   - Student Project News
     - ECE students revved to compete in EcoCar 3
     - 2013 NEMO project still in spotlight
   - Alumni News
     - ECE alumni Lisa and Desi Rhoden create professorship
     - Dinner to honor Prof. Wilmsen on May 9
   - Projects in the Works
     - Proposal for master’s and Ph.D. programs in computer engineering
     - Partnership with Huazhong University of Science and Technology
   - New Independent Study Projects
     - Credit for open-ended projects throughout curriculum
     - Features hands-on workshops and industry mentors
Contact Olivera for more information

- **Charts and Data**
  - College of Engineering research expenditures
  - ECE research expenditures
  - National enrollment trends
  - ECE spring enrollment trends
  - Undergraduate degrees awarded
  - Fall enrollment trends
  - Spring enrollment trends by class
  - ECE freshmen retention rates
  - ECE Colorado undergraduate enrollment, CO institutions
  - Women in College of Engineering
  - Women in ECE
  - Graduate degrees awarded
  - Percent of international degrees awarded
  - 2013-2014 First Destination Survey Results
    - ECE grads earned highest salaries in the College of Engineering ($62,562)
    - 100% of ECE grads have employment related to major
  - How we compare to School of Mines (recently named in top 10 for ROI)

<table>
<thead>
<tr>
<th>Bachelor’s Degree Graduates Salary Survey - Electrical Engineering</th>
<th>12-13 Avg Salary Offers</th>
<th>13-14 Avg Salary Offers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colorado State</td>
<td>$64,663</td>
<td>$62,562</td>
</tr>
<tr>
<td>School of Mines</td>
<td>$62,354</td>
<td>$64,367</td>
</tr>
</tbody>
</table>

- **Comments from IAB:**
  - Multiple questions about mechanical engineering data – *consider showing mechanical engineering/ECE comparisons in future presentations*
  - Board wants to know how retention rates compare across the college – *advisor surveys (currently being produced) may help explain why students drop out and where they are going*

**Update on Fall Action Items:**

- **Action item:** Create a PR packet about the department to help IAB promote ECE
- **Status:** Focusing on web and social media communications
- **Action item:** Expand the department’s LinkedIn presence to advance its reputation
- **Status:** Andrea has been posting updates to the IAB group on LinkedIn
- **Action item:** Have faculty participate in an upcoming meeting to share their research and possibly offer lab tours
- **Status:** Faculty thrilled to hear this – we have assigned at least one professor to each table
- **Action item:** Increase involvement with IEEE
- **Status:**
  - Pete O’Neill delivered seminar on April 22
  - Exploring Engineer in Residence Program
  - More involvement from IEEE in judging senior design projects
  - Senior member elevation event
  - IEEE meetings to be held on campus this year
• **Action item:** Create a directory of IAB members and their technical bios to serve as a resource for senior design students

• **Status:** Senior design students can access IAB LinkedIn profiles from our IAB web page

3. **Prepare for Engineering Days (Tony Maciejewski)**
   In preparation for the board’s participation in E-Days, Tony provided a summary of comments from last spring and actions taken.
   - Address the issue of students not being able to explain WHY their projects are important.
     - **Status:** Established new requirements for student project plans.
   - Help students improve communication and marketing skills, e.g., project posters.
     - **Status:** Ed Minnock and Susan Hunter are working with the students; held poster session on Wednesday.
   - Encourage students to identify where their projects fall on the spectrum of technology in industry.
     - **Status:** Some of you helped students this year.
   - IAB reviewed mid-year design reports.
     - **Status:** We look forward to seeing the impact of your feedback.

**Judging considerations for E-Days**
- How are we doing overall?
  - Can you see the impact of your previous suggestions?
- What are the strengths and weaknesses of the senior design program?
- What changes/improvements would you recommend?
- What are the top three projects? What makes them great?

4. **Lunch and Breakout Session: Discuss Senior Design Program (Facilitators: Jason Gentry and Scott Evans)**
   The board split into groups to share their feedback on E-Days and the ECE senior design projects.

**Results of breakout session:**
- Program is impressive overall
- Impressed with breadth of projects and the amount of work the teams were able to accomplish in a year
- Perceived one-person teams are a shortcoming (note: while this may have been a perception, students are required by the department to work in teams of two or more)
- Noticeable improvement in explaining WHY projects are important, but still room for growth
- Suggested addressing "lessons learned" to help students recognize and grow from mistakes
  - Build on Ed Minnock and Susan Hunter's work with risk analysis
  - Create documentation for projects to help future teams, which could include a section for lessons learned
- Would like to see more interaction with the College of Business to help pitch and market the projects

5. **Election (Lance Guymon)**
   The board unanimously voted in favor of Steve Martin (Avago Technologies) to serve as the IAB vice president for the upcoming academic year; Lance Guymon becomes president.

6. **Closing Remarks (Tony Maciejewski)**
Tony wrapped up the meeting and thanked the board for their participation. He encouraged the board to contact him or Andrea with additional ideas or comments regarding the meeting topics. Following the meeting, some members participated in a social event at The Mayor of Old Town.

**ACTION ITEMS:**
- Continue to emphasize to senior design students the importance of the elevator pitch and being able to explain WHY their projects are important
- Build on Ed and Susan’s work with risk analysis; ask students to outline lessons learned as part of their projects
- Facilitate interaction with the College of Business to help teams pitch and market their projects
- Provide update on Engineer in Residence Program

The Fall IAB meeting is scheduled for **Friday, October 23**.