SUMMARY OF RECOMMENDATIONS
CU-Boulder Engineering Advisory Council Meeting on 10/12/2012

Brief summaries of the key discussion items, reports, and recommendations of the 10/12/2012 meeting of the University of Colorado Boulder Engineering Advisory council (EAC) are provided below. This summary report and the meeting slides may be found on the EAC website: http://www.colorado.edu/engineering/about/engineering-advisory-council.

College Update: Dean Robert Davis provided a college update, including record enrollments and research grant awards. He outlined a plan for growth from approximately 5000 students today to 6000 students by the end of this decade. Associate Dean Jackie Sullivan presented plans for a potential degree in general engineering, with the first focus area being preparation of engineering students to be licensed math and science teachers. Associate Dean Kurt Maute gave an update on research, with steady growth in funding but a future outlook that includes federal budget cuts and the need for strategic investment in key areas of strength where we can compete for large, center-level grants. Key action items and recommendations include

- Articulate the case for growth.
- Form an EAC task force on growth strategy, to report its recommendation at the next EAC meeting.
- Survey student interest in the proposed general engineering degree as a pathway to teaching, and quantify the demand for secondary math and science teachers. Some EAC members noted that companies may prefer to hire discipline-based engineers, rather than general engineers, from our college.
- Compare our proposal success rates to those of peer institutions.

CU Financial & Facilities Update: CU-Boulder’s new Senior Vice Chancellor and Chief Financial Officer, Kelly Fox, shared that the state budget outlook for higher education is up for next year, but then is expected to decline again. Overall enrollments are down about 2% campus-wide, though they are up in engineering. She noted that more national competition for nonresident students, who account for two-thirds of CU-Boulder tuition revenue, is expected. She is not optimistic about state funding for buildings, and so future construction and renovation projects may need to be supported by a combination of fundraising, tuition, and fees, including corporate partnerships. She noted that the campus has started to budget funds for controlled maintenance of older buildings and for finishing shelled space in the Biotechnology Building, rather than relying on state funds. Recommendations to Kelly from EAC members include

- Close more of the gap between resident and nonresident tuition, with resident tuition at the cost of education.
- Reallocate funding from units with declining enrollments.
Retention Update: Associate Dean Diane Sieber gave an update on progress and plans relative to EAC recommendations on student retention. One of the key recommendations is to increase the numbers of engineering students engaged in living-and-learning communities. To this end, Diane reported that a new residential Academic Program (RAP) in Global Engineering has been proposed, based on the successful Andrews Hall model, and she has agreed to be the faculty member in residence. Progress on other recommendations may be found in the PowerPoint slides on the website noted above. Key action items include

- Seek campus approval for the new Global Engineering RAP for a Fall 2013 start.
- Include the first-year engineering projects course as part of RAP curricula.
- Require college advising for students who are considering a transfer out of engineering.

Provocative Actions: Provocative actions to promote excellence in education and research were discussed in small groups. The recommendations receiving the largest number of votes are

- Re-examine first-year student requirements and emphasize living-and-learning environments such as Residential Academic Programs, Engineers Without Borders, and other participating programs, with a goal of building a community of students engaged in our college.
- Revise the performance management system and available awards to establish higher expectations and rewards for teaching/mentoring excellence.
- Increase investment for targeted research efforts, with dollars and hiring of key faculty/staff.
- Focus new research and reorient current research to global challenges that require large, multidisciplinary research collaborations.
- Establish a resource center for teaching/learning excellence and use college classrooms as a showcase for on-line initiatives, multidisciplinary teaching teams, and industry-guided teaching modules.

CU Foundation Update: Jessica Wright laid out a revised structure with an integrated development team: Biotechnology, Engineering, Science and Technology (BEST). She then described fundraising performance (down in terms of dollars raised, but up in terms of number of donors) and plans, noting that big ideas lead to big donations. Recommendations from the EAC include

- Small annual gifts over many years can lead to large gifts, especially in the form of bequests.
- Long-term relationships versus frequent turnover are needed to realize these large gifts.

Lunch with Students: The lunch break included three excellent presentations by students: Brittany Earle described her summer project in Nepal with Engineers Without Borders, Kelly Anderson described her summer internship with ConocoPhillips, and Megan Sawyer gave a presentation on her summer internship at the Universitat Politècnica de Catalunya in Barcelona.
Computer Science Department: Jim Martin, Chair of Computer Science (CS), gave an overview of the CS Department. Its enrollments are beginning to rebound after a decline over the past decade. Several excellent young faculty are spearheading new research directions. And, a Bachelor of Arts major in Computer Science is expected to be approved by the Regents next month.

Education Committee: Steve Dunn reported on key discussion items and recommendations from the Education Committee, including

- Integrate the ATLAS TAM (Technology, Arts & Media) program into the fabric of our college and consider expanding it into an interdisciplinary major.
- Proceed with the “engineering for society” general engineering degree plus licensure, but be careful about expectations of engineering employment opportunities after several years of teaching.
- Proceed with efforts to create a path within the new business minor that includes targeted coursework in engineering management. Also, begin to explore a BS/MBA program for engineering students.
- Residential academic programs should be developed, including a new Global Engineering RAP, along with analysis of their success and cost/benefit ratio.
- International engineering efforts should include a global engineering certificate, targeted recruitment and orientation/integration of international students, increased study-abroad and internship opportunities, and on-campus international experiences for domestic students.

Research Committee: Frank Doerner and Jeff Sczechowski reported on key items from the Research Committee. While there has been great success in recent years, the Research Committee noted the opportunity to take the college research programs to the next level, with the following recommendations:

- Big initiatives should be pursued on top, and not in replacement, of what we are already doing.
- Do a SWOT analysis to identify key research threads across our college and the best opportunities.
- Invest in proposal preparation, especially for large efforts.
- Team with other institutions on major initiatives.

BOLD Advisory Council: Dan Hernandez reported on behalf of the BOLD Advisory Council (BAC), which met the day before. The report included a summary of “scorecards”, which detail progress in areas such as recruiting and performance. Recommendations from the BAC include

- Make the business case for raising more funding for BOLD scholarships. In particular, there appears to be an opportunity to use scholarships to help attain a higher yield of accepted in-state women.
- Work with the Admissions Office on better marketing and messaging for our college, including a virtual tour of our college.
Pre-calculus offerings are needed, as math placement exams show that about 10% of our students are not ready for calculus.

Incentivize departments to improve recruitment and retention of diverse students.

Go beyond new faculty in diversity training.

Re-ignite the college-wide Diversity Action Committee.

Resource Development Committee: Doug Smith reported on the Resource Development Committee (RDC), which met the prior afternoon. In particular, he noted that the Dean’s Fund has achieved nearly $500,000 in annual gifts, which is about double that received prior to the creation of the Dean’s Club (comprised of those individuals who give $1000 or more to the Dean’s Fund). A key action item from the RDC is

Engage EAC members in helping to match corporate executives and their passion with our college’s portfolio and programs.

Wrap-up & Plans for Next Meeting: Upcoming meetings of the EAC are scheduled for 26 April 2013, 27 September 2013, and 25 April 2014. Items recommended for the next meeting include

ATLAS
Plans for research investment
1-2 departmental presentations, with participation by chairs
Presentations by students
Report of the EAC task force on growth strategy
Presentation by David Ikenberry, Dean of the Leeds School of Business