

Semi-Annual Report on Progress and Recommendations from the 4/22/05 Engineering Advisory Council Meeting

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1. Introduction

This report summarizes actions taken and plans made over the past half year by the College of Engineering and Applied Science at the University of Colorado at Boulder, in response to recommendations made by the Engineering Advisory Council (EAC) at its previous meeting on 4/22/05. A more detailed annual assessment of college strategic progress is available at http://engineering.colorado.edu/facultystaff/Strategic_Plan.htm.

2. EAC/RDC Changes

Three EAC subcommittees have been formed:

Education and Outreach Committee:

Chair: Jean Becker, Vice-Chair: Kristy Schloss
Facilitator: Assoc. Dean John Bennett

Research and Corporate/Government Relations Committee:

Chair: Scott Donnelly, Vice-Chair: Pam Drew
Facilitator: Assoc. Dean Stein Sture

Resource Development Committee (RDC):

Chair: Gary Anderson, Vice-Chair: tbd
Facilitator: Dean Rob Davis

The EAC bylaws already provide for the formation of subcommittees. However, minor changes in the bylaws are proposed for the 10/7/05 meeting, primarily to expand the maximum membership of the EAC from 32 to 36 so that the subcommittees can each have 10-12 EAC members.

3. CU Update

New freshmen enrollments at CU-Boulder are 5007 for Fall 2005, down from 5138 in Fall 2004 but up from earlier projections. The decrease includes 258 fewer out-of-state new freshmen in Fall 2005 versus Fall 2004, whereas in-state new freshmen are up by 127. In the College of Engineering and Applied Science, the Fall 2005 entering undergraduate class is larger than in Fall 2004 (669 versus 633). These numbers do not include the 142 undergraduates (including 7 in engineering) who have temporarily enrolled at CU-Boulder after being displaced by Hurricane Katrina.

To help offset the lack of growth in state appropriations and nonresident tuition revenue, a relatively large tuition increase of 28% was approved for in-state students, except that lower-division and upper-division undergraduates in the College of Arts and Sciences had

their tuition increases reduced to 15% and 20%, respectively. Because of the large increase in base tuition, the second step in an engineering differential tuition was deferred for FY06. However, a suite of engineering course fees to support equipment and supplies for laboratory instruction was approved starting in Fall 2005 and will average about \$85 per student per semester.

Hank Brown started as the 21st President of the University of Colorado on 01 August 2005. Phil DiStefano and Susan Avery are continuing in their roles as interim Chancellor and Provost, respectively. National searches are planned during this year for the president and chancellor positions. In addition, Stein Sture, Associate Dean for Research in the College of Engineering and Applied Science, has been appointed to the interim position of Vice Chancellor for Research and Dean of the Graduate School, to replace Susan Avery.

4. Research and Corporate/Government Relations

Key recommendations from the 4/22/05 subcommittee meeting are given in *italics* below, followed by actions taken or planned.

It is very important to obtain state support for large initiatives, and committee members should write letters to the legislature and Governor explaining the importance of university research to the state and industry – The process and timing of possible letters will be discussed at the next subcommittee meeting (10/7/05), with input from CU's Asst. VP for State and Federal Government Relations (Tanya Kelly Bowry). At least a couple of subcommittee members (Ray Kolibaba and Tom Marsh) have supported in the media the importance of CU to Colorado.

A senior lobbyist in Washington, D.C. could assist the College with federal funding – This possibility was discussed with staff from CU's Office of State and Federal Government Relations, who indicated that their office could provide this assistance, perhaps more effectively than a lobbyist hired separately by the College. Tanya Kelly Bowry will attend part of the 10/7/05 meeting to discuss this issue.

The College should collaborate with the Provost and/or Vice Chancellor for Research on legislative breakfasts to highlight CU achievements and positive economic impact – The first breakfast was held 4/26/05 and included Prof. Al Weimer from Chemical and Biological Engineering, who is researching solar production of hydrogen. It is expected that a new Vice Chancellor for Research will be on board prior to when the legislature is back in session (January 2006), and the College's Associate Dean for Research will work with this individual and the Office of State and Federal Government Relations to continue the breakfasts.

The College is encouraged to build partnerships with industry and use these partnerships on major proposals – To help build the necessary partnerships, the Dean's office and Engineering Development office hosted 51 corporate visits to the College in FY05, up from 20 corporate visits in FY04. Direct funding of contracts and grants in the College by industry increased to \$5.9M in FY05, up from \$4.5M in FY04. These partnerships will be used in the future to pursue large federal research grants.

It is recommended that the College strengthen its collaboration with the CU Health Sciences Center – Through the CU Molecular Biotechnology Initiative, collaborations are being pursued by the College with biosciences on the CU-Boulder campus and at the CU Health Sciences Center. The Mechanical Engineering Department hired this year a second faculty member jointly with the School of Medicine.

5. Education and Outreach

At the subcommittee meeting on 4/22/05, members chose to focus on an outline for a proposed Engineering Honors Program, with the objectives of attracting, retaining and challenging a diverse group of outstanding students. Recommendations for this program include:

- *HONR designation for courses/sections with enriched content*
- *Include a summer component with internships, service projects, research expenses, and study abroad*
- *Offer an industry track and a research track*
- *Target students with high accomplishment and cultural diversity, who may otherwise be difficult to attract*

A complete draft of the Engineering Honors Program proposal is being prepared, taking into account the feedback received, and it will be discussed at the 10/7/05 meeting.

Another key educational advance is that 37% of the undergraduates in the College participated in one or more extracurricular enrichment experiences (discovery, professional or service learning) in AY04-05, up from 23% in AY03-04. In recruiting, 246 prospective students (plus about 400 family members) attended the new “Explore CU Engineering Day” in March 2005; 72% of the attendees confirmed their intent to enroll in the College, including 81% of the women and 92% of the underrepresented minorities. The overall size of the first-year class of undergraduates is up by more than 5% (669 in Fall 2005 vs. 633 in Fall 2004), despite a drop in enrollments for the campus as a whole. Diversity measures of the entering freshman class are also up.

6. Resource Development

The Resource Development Committee discussed two potential fundraising projects: a campus-wide biotechnology building and Engineering for Developing Communities, and various RDC members volunteered to help with each project. Key recommendations are given below in *italics*, followed by actions taken or planned.

A visionary, fact-based case statement is needed to construct an air-tight argument for generous support of the proposed biotechnology building, similar to that behind the ITLL and DLC – A campus committee has met over the past few months to perform a feasibility study, a required precursor to a more expansive program plan, for the building. In addition, a case statement is being drafted and will be shared with RDC members for their input at the 10/7/05 meeting.

The College's Engineering for Developing Communities (EDC) program is an example of social conscience reflective of a CU engineering education and may be a good RDC project as follow-on to the successful Earn-Learn project – An external advisory board has been formed for EDC, and several EAC and RDC members have been invited to join. In addition, Gary Anderson along with Engineering Development is organizing an informational brunch for this program on 10/8/05; interested EAC/RDC members are encouraged to attend and bring someone new. In addition, the Dean would like EDC fundraising to support college priorities (and vice-versa); one possibility is to seek one or more major donors to establish an endowment that would support a professorship in sustainable technologies and also include programmatic support and earn-learn assistantships for student projects sponsored by EDC.

In other development news, the College added five new endowed chairs and professorships starting this academic year, and a couple more are in the works. The College received \$4.7M in new gift funds in FY05, up from \$3.7M in FY04 and \$3.9M in FY03.

7. Wrap-up Items

At the end of the meeting, several recommendations were made in response to the Dean's request for feedback. These recommendations are given in *italics* below, followed by actions taken or planned.

More time is needed for breakout groups, including the logistics of getting lunch – For the 10/7/05 meeting, the breakout groups (subcommittees) have been extended from 1 ½ to 2 hours, and lunch will be served prior to the breakout groups.

Subcommittees are good and help provide continuity – The three subcommittees will be continued, with breakout meetings during the semi-annual EAC meetings and additional activities between the meetings.

Students are wonderful – can't get enough of them at the meetings – We'll continue to have student presentations at the meetings and look for ways to involve students in outreach and recruiting. Two students are scheduled to speak at lunch for the 10/7/05 meeting.

Are there strategic plans for the University, and can we help shape them? Might there be a campus-wide effort to energize activities around the theme of our students as world citizens? – The strategic plan for the University of Colorado System is Vision 2010, which can be found at <http://www.cusys.edu/vision2010/vision.pdf>. The CU-Boulder campus plan is Quality for Colorado and can be found at <http://www.colorado.edu/chancellor/strategic.html>, with further discussion at <http://www.colorado.edu/chancellor/state02/admin.html>. With the recent changes in leadership, there will be new strategic planning done at the system and campus levels. Each college was just recently asked to submit strategic-planning documents to the Provost, so there may soon be an opportunity to influence campus plans, especially if new resources come available.