Engineering Education Update: Focus on Recruiting and Retention

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Increase Quality, Size and Diversity of Applicant Pool

- K-12 outreach programs for teachers and students
- Prospective student database
- Contact CO students who perform well on the ACT and PSAT
- Improve College web site and promotional materials
- Visit Colorado high school science and math teachers, and college counselors
- Utilize alumni and EAC more in recruiting efforts
- Strengthen MAPS requirements
- Partner with the National Center for Women and Information Technology
Improve Selectivity and Quality of Yield

• Create Engineering Honors Program
• Survey all accepted students
• Significantly increase level and quality of contact with prospective students
• Meet demonstrated financial need of every student
• Establish a CU presence at State Science Fairs, FIRST Robotics, and similar programs, including offering merit scholarships to top students
• Manage enrollment where needed
Ensure the Success of Our Students

- Measure and evaluate everything that we do
- Comprehensive Program Review in 2005-2006
- Improve quality of advising and instruction
- Expand first year programs and oversight
- Engineering Fellows
- Expand two-semester CALC I offerings
- Ensure meaningful Humanities and Social Science elective choice
- Expand opportunities for our students to communicate orally and in writing
- Expand opportunities for service, professional and discovery learning
Representative Targeted Initiatives

- Admitted Students Day
- Western Slope Math and Science Center
- Native American Pre-Engineering Program
- Denver School of Science and Technology
- Lafayette Pre-Engineering Academy
- Summer Bridge
- ITLL Teacher workshops
- Success Institute
- High School Honors Institute
- Engineering Honors Day for top-ranked students
- MESA Mark for science and math teachers
- MESA Fall Fling for HS students
- Girl Scout Badge Days
- Colorado Space Grant Consortium programs
Major Opportunities

• Leadership in K-12 engineering education
• Unique nature of Herbst Program and quality of Herbst faculty
• Opportunity and motivation to lead innovation in undergraduate engineering education
• “The Engineer of 2020” goals resonate with College strategic educational goals
Major Challenges

• Need for significant increase in scholarship endowment
• Diversity – hard work to break even in a zero-sum game
• The skills needed to be a successful engineer in 2020 are not the same skills that we taught in 1980 (or 1960)
• The need to educate engineers with a global perspective
• Faculty morale in austere times
What’s Next?

• CU Engineering Education Forums over summer of 2006, leading to Workshop in early Fall
• “Business Plan for Diversity”
• Continue to nurture programs in development (e.g., Honors Program)
• Suggestions?