Faculty Senate Town Meeting

School of Engineering

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Dean

September 17, 2003

SoE Performance Plan Overarching Goals

- Expand the Research Enterprise
- Enhance Education
- Achieve Diversity
- Increase Scientific and Technological Entrepreneurship
- Build Communities
- Redesign and Invigorate Enabling Activities
Goal - Expand the Research Enterprise

- Hire several "rising star" senior and high-potential junior faculty in the BT and IT Constellations – complete Future Chip Constellation.

- Hire top-notch individuals into Clark and Crossan and Redfern endowed chairs.

- Hire 7 research-intensive, senior and early-career replacement and new faculty in SoE Key Research Focus Areas – focus on Biological Engineering and Information Systems.

- Establish two new School-level interdisciplinary research centers – e.g., Fuel Cell Materials and Manufacturing.

Metrics for Expanding the Research Enterprise

- Sponsored and gift-supported research of over $40M/year by FY08.
- 75% of new junior hires receive Career Award.
- Number of World Class Faculty – 15% by FY08.
- % of Research Active Faculty – 80% by FY08.
- Average Research Expenditures/research active faculty of $300K/year by FY08.
- Number of Research Faculty and Staff – 50 by FY08
- # of GRA’s – 50% of all GA’s.
- Establish and provide seed support for two new SoE or joint research centers in FY04.
- USNWR Graduate and Research Rankings – Top 15 by FY08.
SoE Research Expenditures

Goal—Enhance EDUCATION

- Create an innovative, state-of-the-art Core Engineering experience – pilot implement Core Engineering Renaissance Program in Fall of 04.
- Incorporate new topics/courses into the curriculum that are critical to the career success of our graduates – e.g., entrepreneurship and biosciences.
- Implement improved student advising policies and procedures.
- Expand the Multidisciplinary Design Laboratory capstone design experience – involve at least 250 students from not less than 6 engineering departments.
Goal – Achieve Diversity

- Aggressively seek, interview and hire qualified women and underrepresented minority faculty – especially rising-star faculty at the senior ranks.
- Promote interest and the enrollment of women and underrepresented minority graduate students in the School of Engineering.
- Highlight and promote WIE events, activities and programs, including scholarships, mentoring programs, etc.

Goal - Increase Scientific & Technological Entrepreneurship

- Integrate principles and practices of engineering entrepreneurship across the curriculum – from Core Engineering to the Multidisciplinary Design Laboratory – incorporate entrepreneurship components into at least 25% of MDL programs.
- Grow involvement of students with entrepreneurial companies in the Incubator and Tech Park.
Goal – Build Communities

- Create comprehensive, strategic partnerships with major U.S. and international corporations, including research, EWP, philanthropy, etc.

Goal – Redesign & Invigorate Enabling Activities

- Hire outstanding faculty into BME and CHBE department chair positions.
- Finalize and implement revised annual performance review and merit salary increase processes.
- Work with the Institute SUMAC Committee to relocate research-active faculty with peer-reviewed external funding in strategic Biotechnology areas.
Summary of Top Priority '04 Actions

- Grow Research
  - Aggressively seek and hire Constellation faculty.
  - Hire 7 research-active, senior and early career replacement faculty in Key Focus Areas of Biological Engineering (>50%) and Information Systems.
  - Effectively mentor and support new faculty to promote career success.
  - Grow number of Interdisciplinary Research Centers.
- Complete development and pilot implementation of Core Renaissance Program.
- Hire women and/or underrepresented minorities into replacement faculty positions.
- Develop New Undergraduate Advising programs.

Legacy Effects of the 90's

From AY92/93 to AY97/98 – 22 SoE hires, 36 departures, net loss of 14 faculty

The 15 hires who remain at Rensselaer:
- Shiv Kalyanaraman
- Michael Shur
- Natacha DePaola
- Richard Siegel
- Pulickel Ajayan
- Linda Schadler-Feist
- Chip Kilduff
- George Xu
- Terry Blanchet
- Kenneth Jansen
- Antoinette Maniatty
- Alek Ostrogorsky
- Daniel Walczyk
- James Li
- Kurt Anderson

Excellent faculty – virtually all junior hires NSF Career Award Winners
Demonstrates impact of hiring in focus areas of high potential – e.g., Nanomaterials
Legacy Effects of the 90’s

90’s Faculty Hiring in SoE Departments
Key to Info/Bio/Nano Research Thrusts

From AY92/93 through AY98/99 (8 years):
- ECSE – 2 hires, 12 departures = net loss of 10
- BME – 1 hire, 2 departures = net loss of 1
- CHE – 4 hires, 5 departures = net loss of 1
- MSE – 6 hires, 6.5 departures = net loss of 0.5