



Designing the College of Engineering for the Future



Faculty and Staff Meeting January 13 Agenda

- 3:30 p.m. Purpose of meeting – Paul
- 3:35 p.m. Report on Feedback from Listening Sessions – EELI
(Sarah)
- 3:45 p.m. Update on Designing the CoE for 2010 – Paul
Guiding Principles
Operating Principles
- 4:00 p.m. Report from Working Groups – Pat Farrell
Mike Corradini (for Jerry Kulcinski)
- 4:20 p.m. Discussion / feedback and next steps
- 4:30 p.m. Refreshments



Vision

- A College of Engineering that offers greatly increased cross-disciplinary, cross-departmental, and cross-campus research and education – an increasingly collaborative community of scholars
- Administrative infrastructure and reward system that enable, encourage, and support this opportunity

A college that is more than the sum of its parts



Listening Session Feedback

***Changes described by attendees fall into three broad categories:
Environment, Interaction, and People***

Environment

- Leadership, incentives, and flexibility must exist for students, faculty, and staff to participate in experimentation, change, and choice.
- Faculty and staff must provide an education that prepares our students to enter the world as it will be, not as it was.
- Faculty, staff and students need to be able to work effectively in an environment where diversity is the norm rather than the exception.

Interaction

- Cross-disciplinary research and education will be the norm, but only if the infrastructure exists to support them.
- Interaction across groups (faculty, staff, students, departments, etc.) will help build community and encourage further cross-disciplinary collaborations.

People

- Professional development for faculty and staff will enable them to keep pace with changes in the college, the profession, and the world, and thus serve students well.



Designing the College for the Future

Background

- Powerful external forces are driving major changes in engineering education and research
 - Globalization
 - Technology revolution
 - Fusion of engineering disciplines, science and engineering, and increasing role of engineering in medical and health care-related areas
- For U.S. engineers to continue to be in demand, they must be innovative and must think at the system level
 - We need to provide a learning environment and education that gives our students the cross-disciplinary breadth needed to learn to function at this level



Transforming the College

We must design the College of Engineering for pre-eminence and sustainability in this rapidly changing environment

- Create a clear and coherent *Vision of the Future* focused on **student learning, quality of faculty and staff life, and reduced costs per student**
- Transform the education and educational delivery system consistent with the *Vision of the Future*
- Transform the organizational systems consistent with the *Vision of the Future*



Goal

Educate engineers who will be leaders in tomorrow's world by exploiting the breadth of learning opportunities at UW-Madison

Continue to be, and be recognized as, a pre-eminent College of Engineering



Designing the College for the Future

Selected (re) design elements:

- CoE vision and goals
- Re-envision curriculum and education
 - Department level reviews
 - Develop cross-college, cross-disciplinary opportunities
 - Identify new options to help achieve vision
 - Broader range of students and teaching approaches
- Encourage faculty and staff creativity
 - Incentives / enablers to develop and enhance creativity / connectivity
- Review/change CoE organizational structure
 - Provide infrastructure to support vision / goals
- Institutionalize process of re-design into culture



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Guiding Principles

Priority will be given to changes that enhance the CoE

- Excellence in education and scholarship
- Flexibility and diversity
- Connectivity and sense of community
- Creativity and inventiveness

And make the college more than the sum of its parts



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Operating Principles

In implementing changes, CoE leaders will

- Identify a process for implementing change
- Rely on the Task Force to gather data and solicit feedback throughout the process
- Communicate with faculty, staff, and students concerning relevant issues and data
- Implement changes that support the vision and goals
- Communicate changes in the process
- Focus on what is possible and most beneficial to change

	Infrastructure Design Working Groups
Working Group	Charge
Information Collection Working Groups	The purpose of these working groups is to obtain and analyze the background data and information required to efficiently and cost-effectively restructure the College for the CoE 2010 Vision
Metrics	The purpose of this group is to recommend a set of metrics to be used to guide allocation of resources in the CoE
Administrative Services	The Deans will propose principles for deploying administrative support services
Alternative Revenue	The purpose of this group is to recommend potential new revenue sources for core functions and an action plan to develop new revenue streams from those sources

	Infrastructure Design Working Groups
Working Group	Charge
Implementation Working Groups	The purpose of the Implementation Working Groups is to develop implementation plans for the CoE of 2010 for review and evaluation by the appropriate bodies and personnel
CoE Structure	The purpose of the working group is to develop a detailed recommendation for how the College of Engineering should be structured for the future
Technology and Student Services Support	The purpose of this working group is to assess the current administrative location of support for faculty, staff, and students in the College and develop recommendations for how this support should be organized and where various units (CAE, Library, IT support, WCAM, MSC, Shops, ECS, SLC, etc.), should reside administratively
Education Outreach	The purpose of this working group is to develop a detailed plan for educational outreach by the CoE, along with a business plan and recommended funding sources for implementation



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Communication and stakeholder input

- Communication plan
- Plan for stakeholder input





Questions or comments?



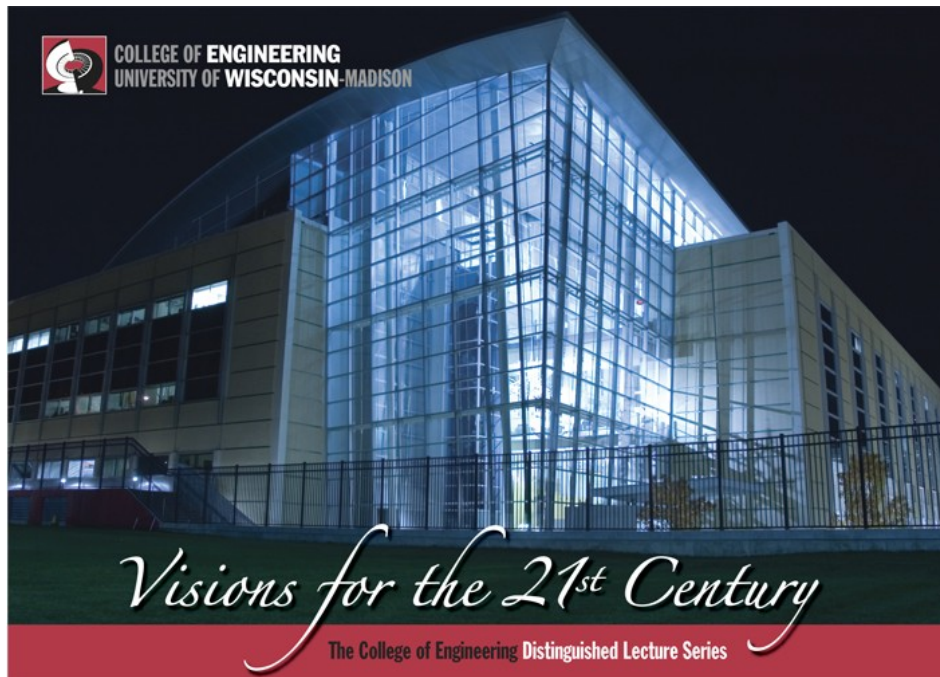
What is your dream?



Designing the College for the Future

Communication and stakeholder input

- Communication plan
- Plan for stakeholder input



Strategic Priority 1

- Design the CoE for 2010 and Beyond

Strategic Priority 2

- Nucleate major college-wide thematic research / education programs
 - seed funding initiated

Strategic Priority 3

- Restructure administrative support to provide better service

Action Plan

- See CoE 2010 Task Force Action Plan
- Change Inter-engineering to Engineering Science? Systems? Other? Dept.
- Implement multi-department service units plan



Global Environmental Issues

- Global warming
- Energy supplies
- Population pressure
 - Hunger and disease, threats of pandemics
- Sustainable environment
- Clean water
- Other resource limitations

All are major engineering challenges



Designing the College for the Future

UW-Madison CoE Faculty Committee View: A curriculum that provides a strong foundation, including

- Math – the language of science
- Science – physics, chemistry, biology
- Engineering toolkit – information technology, nanotechnology/materials science, biotechnology
- Experience in developing multi-disciplinary systems approach to design
- Ability to learn independently about issues outside technical core
- Understand cultural differences to work effectively in a diverse team environment



ACADEMIA

SHAKING UP OXFORD

Businessman
John Hood plans to
reinvent the university.
And the dons are
fighting back.

BY STANLEY REED

