



Strategic Plan

- Engineering Strategic Plan written in 2004
- Provost Fuchs charged the Strategic Plan Advisory Council to write a University plan that was completed May 2010
- Update the 2004 plan 2010/11
 - Take into account economic conditions
 - Build in the spirit of the university plan

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Drivers

- Turnover of 1/3 of faculty over the next 5-10 years
- Update and sharpen vision
- Exploit opportunities for stronger messaging
- Prioritize investments and garner university support
 - Growth of faculty in engineering
 - Facilities needs (short and long term)

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Process

- Assess progress on the 2004 plan
 - Identify successes
 - Identify remaining challenges, items no longer valid, new trends, etc.
- Develop an initial vision (LRC)
- Engage departments and others in planning process (directors and chairs)
- Initiate college-wide committees
- Enable interactions between activities

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Time Line

- October
 - D&Cs begin plans within departments
 - ECC provides high-level input
 - College-wide Subcommittees begin assessments
- December
 - Departments and subcommittees finish initial plans
 - Retreat with D&Cs and Advisory Committee

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Time Line (cont)

- January
 - Post draft (bulleted list) for community input
- February
 - Edit and revise plan based on feedback
 - Draft next version
- March
 - Synthesize plan in retreat (if necessary)
 - Finalize budget, hiring, facilities, etc.
- April
 - Review plan with ECC

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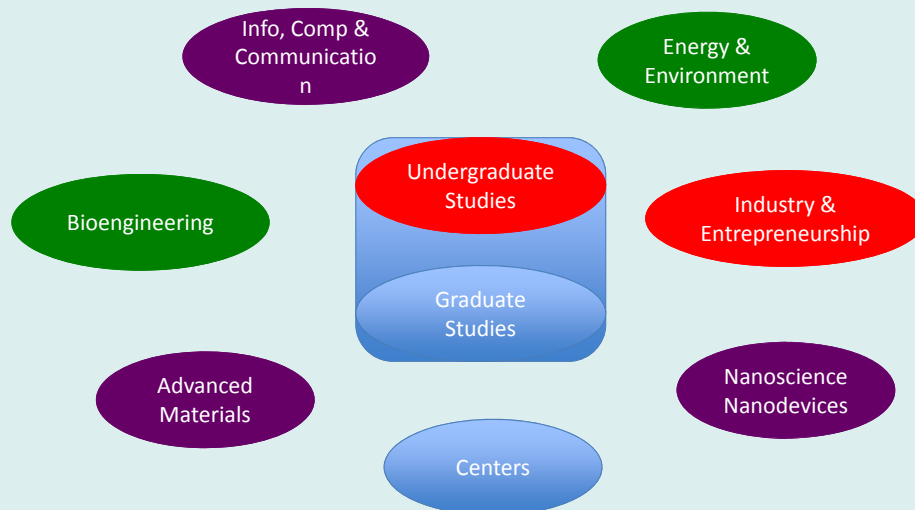
Department Plans

- Applied & Engineering Physics
- Biological & Environmental Engineering
- Biomedical Engineering
- Civil & Environmental Engineering
- Chemical & Biomolecular Engineering
- Computer Science
- Earth & Atmospheric Sciences
- Electrical & Computer Engineering
- Mechanical & Aerospace Engineering
- Materials Science & Engineering
- Operations Research & Information Engineering

Note departments in black are outside the COE process

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Cross-cutting Committees



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Assessment: Research

- Emerging research areas: systems biology and biomedical engineering; nanoscience; and energy and the environment
- Enabling research areas: information, computation and communication; advance materials; complex systems and networks

Cross-cutting Academic Committees

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Assessment: Faculty

- Objective A: Recruit and retain a superb faculty
- Objective B: Enhance educational effectiveness
- Objective C: Encourage and enable faculty excellence in all areas (e.g., 3:2:1)
- Objective D: Make dual career solutions a strategic priority

Cathy Dove in collaboration with CoE offices

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Assessment: Facilities

- Objective A: Develop a long-range comprehensive master plan and timeline
- Objective B: Renovate existing facilities and infrastructure
- Objective C: Create a learning, library, and service center
- Objective D: Provide significant additional research, instruction, and office space for CS, ECE, MAE and ORIE
- Objective E: Provide additional research, instruction and office space for CBE and CEE
- Objective F: Provide offices, laboratories, and instructional facilities for BME
- Objective G: Provide an enhanced facility for AEP

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Assessment: Ugrad Studies

- Objective A: Enhance the undergraduate educational environment and experience
- Objective B: Enhance the engineering undergraduate curriculum and implement procedures for assessment and change
- Objective C: Recruit the highest quality undergraduate students
- Objective D: Become a leader in the education of women and underrepresented minority engineers

David Gries, Betsy East and Diversity Programs in Engineering Office

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Assessment: Grad Studies

- Objective A: Increase the number of PhD students
- Objective B: Improve the infrastructure to support graduate students
- Objective C: Improve the graduate student academic and community experience
- Objective D: Strengthen the quality and impact of the Master of Engineering programs

Rajit Manohar, Rick Allmendinger and Diversity Programs in Engineering Office

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Assessment: Staff

- Objective A: Increase the job satisfaction and retention of staff members with the experience, skills, and professionalism to support the college goals
- Objective B: Continuously improve the work climate
- Objective C: Improve the quality and diversity of staff through continuous professional development and enhanced recruitment

Cathy Dove in collaboration with CoE offices

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Assessment: Alumni

- Objective A: Engage alumni in recruiting the best possible students to Cornell
- Objective B: Promote alumni networking with engineering students and graduates
- Objective C: Involve alumni in projects that enhance the experiential goal of undergraduate curricula and Master of Engineering design projects
- Objective D: Promote Cornell Engineering alumni support for fellowships for engineering graduate students of high merit and scholarships for undergraduates; encourage alumni support for other college priorities
- Objective E: Encourage alumni involvement in faculty research, consulting assignments, and opportunities for sabbatical experience

Kathi Warren in collaboration with CoE offices

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2010 College Plan

College of Engineering Aspiration:

The College of Engineering at Cornell University will be widely recognized as a top-five engineering college in undergraduate and graduate studies

Enabling Goals:

1. To recruit, retain and enable a diverse community of exceptional faculty, students and staff
2. To educate undergraduate and graduate students to become global leaders
3. To be world leaders in important areas of research
 - a) to sustain and expand our leadership role in: advanced materials; information, computation and communication; and nanoscience
 - b) be the premier research university in the emerging areas of energy and the environment; and systems biology and biomedical engineering
4. To increase our interactions with industry; and create a fertile environment for entrepreneurial activities for faculty and students

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Ivy League Deans

Vince Poor (Princeton) Sherry Murray (Harvard)
Eduardo Glandt (Penn) Lance Collins (Cornell)



Joseph J. Helble (Dartmouth) Feniosky Peña-Mora (Columbia)
Rod Clifton (Brown) Kyle Vanderlick (Yale)

August 2010


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"Ivy Engineer"


- Broad education (liberal studies on equal footing with engineering)
- Leadership training
- Focus on engineering fundamentals
- Association with high standards and distinction the Ivy League represents
- Alumni Engagement/Network
- High expectations of graduates

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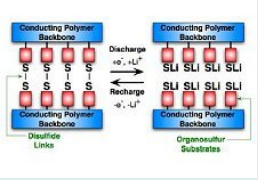
Energy Institute



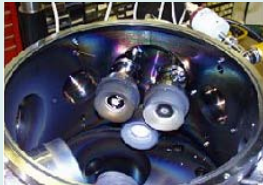
Jeff Tester
David Croll Chair




Combustion




DOE Energy Frontier Research Center
King Abdullah University for Science and Technology (KAUST)






Geothermal




Carbon Footprint



Biofuels


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Biomedical Engineering




Mike Shuler, Chair

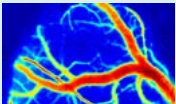
<http://www.bme.cornell.edu/>



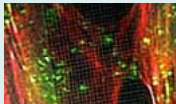
Biomechanics



Drug Delivery



Imaging



Tissue Engineering

- BME program established 1994; department established 2004
- 12 faculty
- Currently a graduate field and undergraduate minor
- Aspires to have an undergraduate major (high student excitement)
- Ideally tied to growth of COE enrollment

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What are the new themes we should keep an eye on over the next 10 years?