

Bioengineering

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Dean of Engineering
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Engineering Strategic Plan

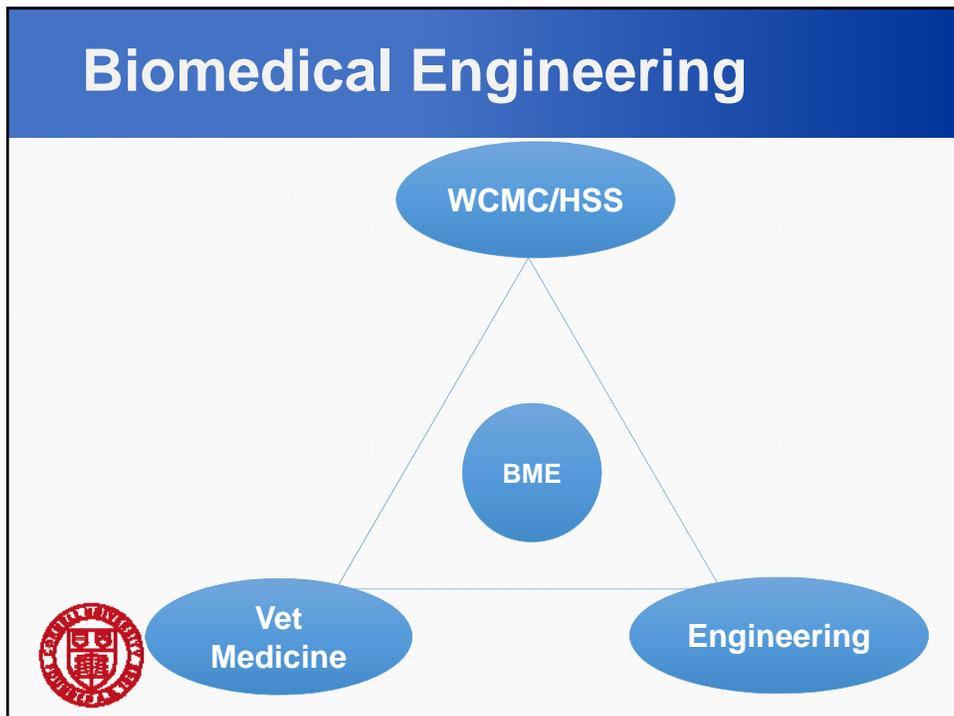
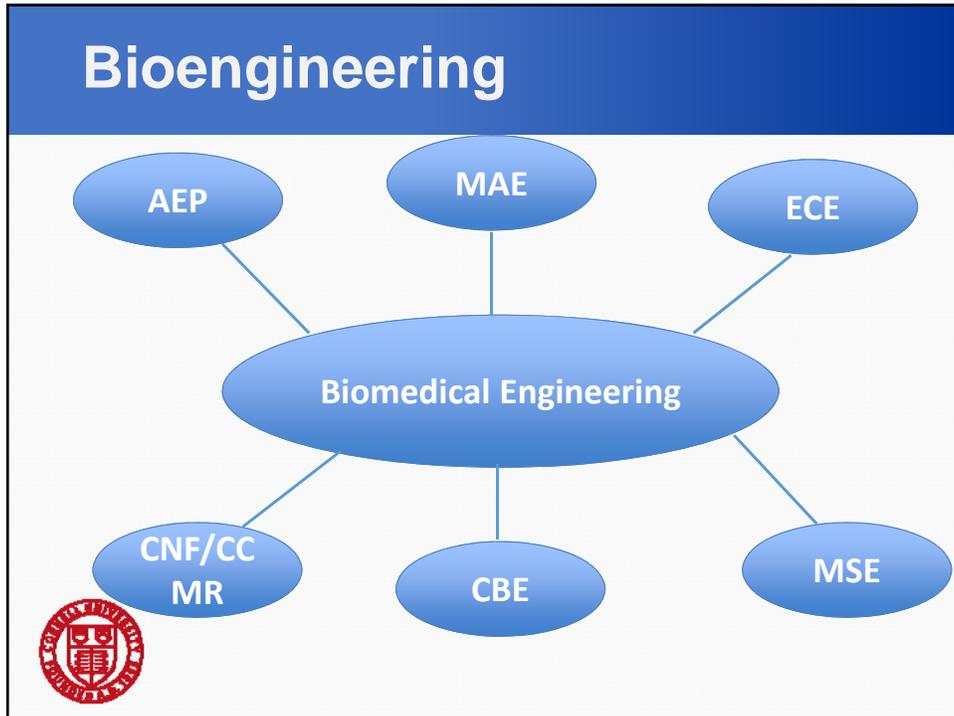
College of Engineering Aspiration:

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; complex systems, network science, and computation
 - b) to be the premier research university in the emerging areas of energy; and bioengineering
4. To increase our interactions with industry; and create a fertile environment for entrepreneurial activities for faculty and students





BME History

- Graduate field started 1998
- Department founded 2004
- BME faculty were “new” to Cornell (not transferred from existing departments)
- Originally 2.5 FTEs
- Currently 13 FTEs (16 total faculty)
- Established
 - PhD Program
 - M.Eng Program
 - Undergraduate Minor



Accomplishments

- 13 FTEs tenure track faculty (10 @ 100%; 6 @ 75% or 25% with CBE, ECE, and MAE); almost all faculty hired at Assistant Professor level
- Outstanding research program (\$800k/faculty per year in research expenditures, 3 major awards from BMES)
- 100 PhD students, 85 M.Eng; 40-50 undergraduate minors per year
- More NSF Fellows over the last 4 years (36) than any other BME department in the country
- Ranked 15th nationally (USNWR) – smallest of top 20 programs and only one without an undergraduate major



Highly Collaborative

- 57 members of the graduate field, including 8 from WCMC; Field members from 7 colleges
- All BME faculty have or have had joint research projects with faculty at WCMC and many with the Vet School
- Partnered with Human Ecology on the new MRI facility
- NIH-sponsored Center of the Microenvironment and Metastasis—first joint center between Ithaca and WCMC



Linkage With Weill

- Essential to both BME and Weill
 - All top 10 medical colleges (except Yale) are associated with a top 12 or higher BME department
 - All top 10 BME departments associated with a strong medical college
- Educational linkage is important
 - PhD immersion term
 - Several PhD students do thesis project at Weill
 - Several courses are shared electronically; Weill faculty travel to Ithaca to help with BME 4110: Science and Technology Approaches to Human Health
 - Joint M.Eng design projects with Weill & possibly Cornell Tech
 - Biomedical Devices Institute between campuses possible



Aspiration and Goals for BME

- **Widely recognized as a top 5 department**
- **Grow the faculty to 22 tenure track faculty**
 - Expand the research opportunities, collaborations and impact
 - Support the creation of an undergraduate major
 - Enhance technology transfer and commercialization
- **Build a new BME Building**
 - House the growth of BME
 - Engineering space in Weill Hall filled to capacity
 - Need an additional 110,000 GSF
 - Home for the undergraduate major
 - Shared facilities for biologically oriented research across engineering



Department Leadership



Acknowledge Mike Shuler, Chair of BME, for all he has done.

Welcome Marjolein van der Meulen as incoming Chair of BME.

