

Bioengineering

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Dean of Engineering
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Engineering Strategic Plan

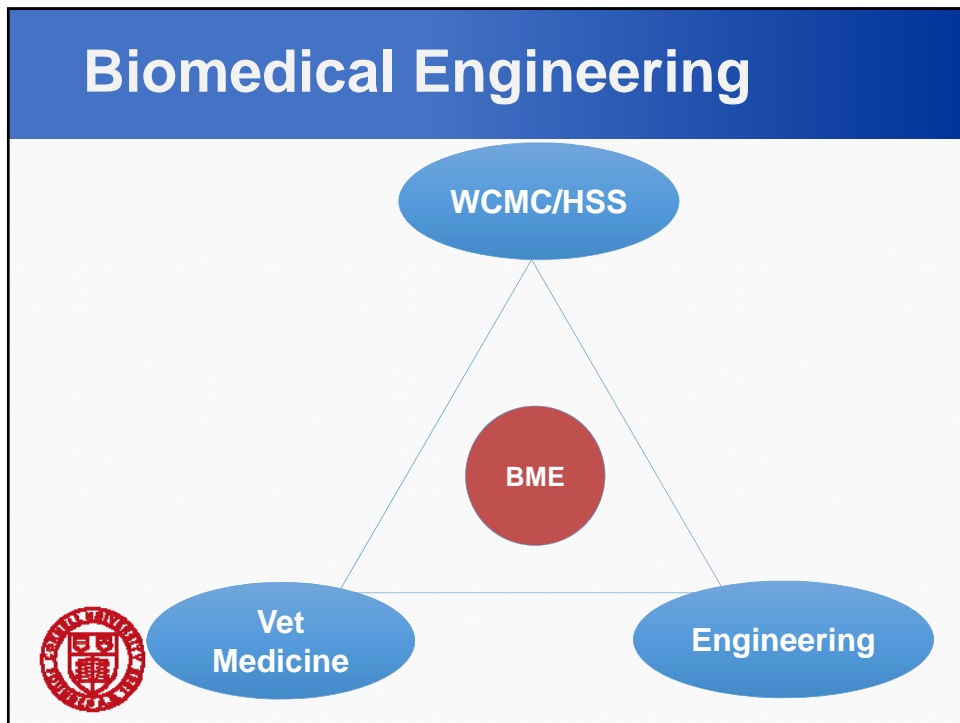
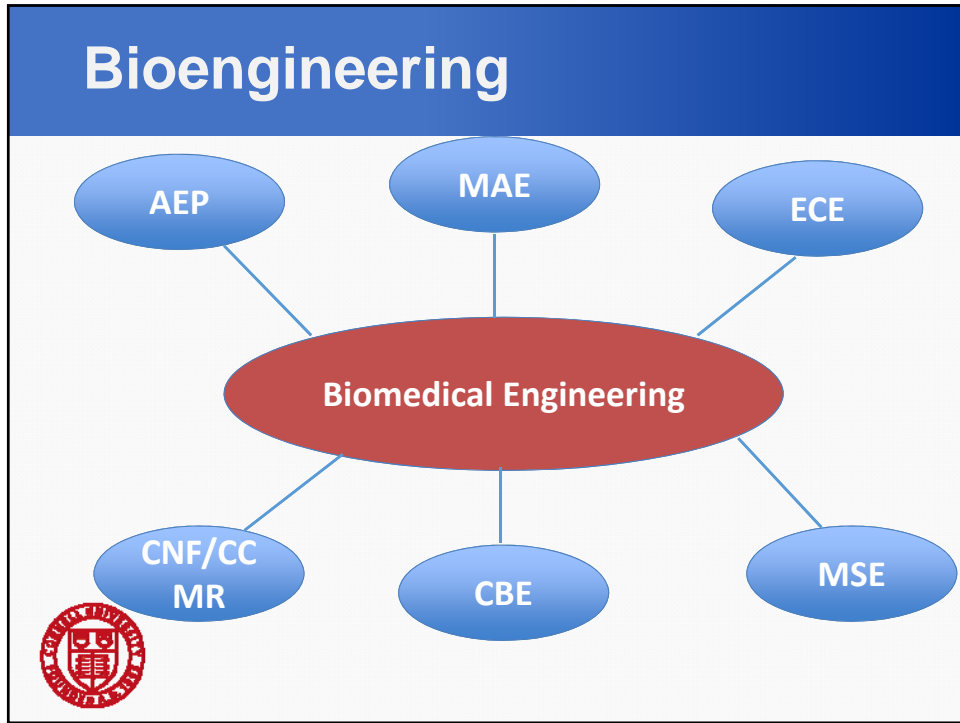
College of Engineering Aspiration:

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 “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 complete thesis project at Weill
 - Several courses 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

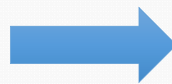


Aspiration and Goals for BME

- **Widely recognized as a top 5 department**
- **Grow the faculty to 22 tenure track faculty**
 - Expand research opportunities, collaborations and impact
 - Support 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.

