College of Engineering

New Graduate Student Orientation

AUGUST 23, 2018

Babatunde A. Ogunnaike, Dean
The College of Engineering will foster an interdisciplinary learning environment, rich with advanced research focused on societal challenges, to produce global engineering leaders and entrepreneurs, fundamental advances in science and technology, and game-changing inventions.
We will:

- Transmit knowledge (i.e., Teaching)
  - Our first calling (until early 1900s)
- Generate knowledge (i.e., Research)
  - Added in the 1900s; Made the American Universities the envy of the world
- Translate knowledge (i.e., Innovation and Entrepreneurship)
  - Distinguishing feature of a great 21st century College of Engineering in a great Research University
TODAY: AT A GLANCE

154 Faculty
175 Staff
3,350 Students
   2,384 Undergraduate
   966 Graduate
18,186 Alumni

16 College-based research centers
12 University-based research institutes
8 National Academy of Engineering Members
31 Named Professors
8 Career Development Named Professors
RESEARCH CENTERS

Catalysis Center for Energy Innovation (CCEI)
Center for Applied Coastal Research
Center for Bioinformatics & Computational Biology (CBCB)
Center for Biomechanical Engineering Research (CBER)
Center for Catalytic Science and Technology (CCST)
Center for Composite Materials (CCM)
Center for Fuel Cell Research
Center for Information and Communications Sciences (CICS)
Center for Innovative Bridge Engineering
Center for Molecular & Engineering Thermodynamics (CMET)
Center for the Study of Metals in the Environment
Delaware Center for Transportation (DCT)
UD Mid-Atlantic Industrial Assessment Center

INSTITUTES

Center for Carbon-Free Power Integration (CCPI)
Delaware Biotechnology Institute (DBI)
Delaware Environmental Institute (DENIN)
Disaster Research Center
Delaware Rehabilitation Institute (DRI)
Energy Institute (UDEI)
Institute of Energy Conversion (IEC)
UD Nanofabrication Facility (UDNF)
Milestones

• 1st PhD Program at UD was in Chem E

• Anniversaries

  15 Years
  MSE (2013)

  100 Years
  CBE (2014)

  125 Years
  ECE (2016)

  125 Years
  ME (2016)
Funding & Grant Awards

Funding by Sponsor

NOTE: Other (10%) includes foundations (Unidel), state, endowments, etc.
Brand New Research Initiatives

- DARPA—CCM
- Recent Additions
  - NNMI—NIST: NIIMBL
  - NNMI—DOE: RAPID
  - 3DMI (Delaware Digital Design and Manufacturing Institute)
- Industrial Partnerships
Sample of Cross Disciplinary Graduate Research Programs

- Advanced Manufacturing Science & Engineering
- Advanced Materials
- “Big” Data
- Bioinformatics
- BIOMS
- Cybersecurity
- Financial Services Analytics
- Energy
- Environmental Science & Engineering
- Smart Infrastructures
Venture Support and Commercialization Programs

Venture Support

- VentureOn
- Summer Founders
- Startup Advising (w/John Currie)
- Hen Hatch

Commercialization

- UD I-Corps Site
- Blue Hen Proof of Concept
- Workshop Wednesday
- Attorney-in-Residence

**Combined:** UD Venture Mentoring Service
Blue Hen Proof of Concept

• Designed for later-stage innovations with a de-risked business model

• Three tracks:
  • Student Prototyping: $10k
  • Faculty/Grad Student Proof of Concept: $75k
  • Post-doctoral Innovation Fellowship: $75k

• Access to UD Venture Mentoring Service

• Applications due **October 13th**
CONCLUSIONS

• GRAD SCHOOL
  ▪ Journey to the *last stop* on the “formal education” train
  ▪ Opportunity to develop lasting skills for a lifetime of discovery
  ▪ Intense, but rewarding
  ▪ Great time to be an Engineering graduate student!
Q&A