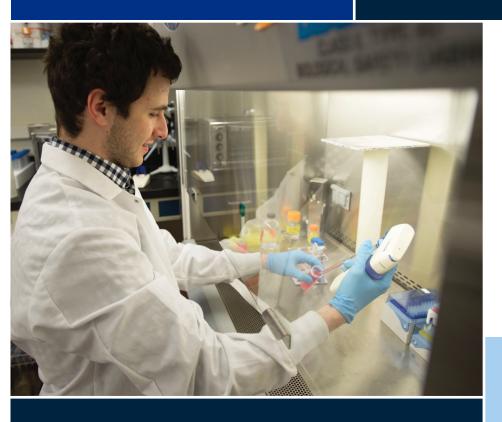


# BIOMEDICAL ENGINEERING

# SNAPSHOT





Cheng Dong Department Head

The Department of Biomedical Engineering administers the undergraduate major and minor in biomedical engineering. The department's graduate program is a part of the University-wide Intercollege Graduate Degree Program, offering both M.S. and Ph.D. degrees in bioengineering. Our research and

education missions focus on applications of engineering principles and technologies to medical and life sciences for the betterment of human health and society.

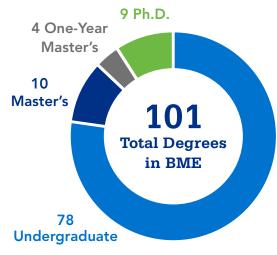
# Our Students are Engaged:

**APPROXIMATELY** 

**75%** 

Penn State BME students who participate in experiential learning: Co-ops, internships, undergraduate research opportunities, study abroad opportunities, and global capstone projects

# Degrees Awarded (2016-17)



## **Minors and Degrees Offered**

Bachelor of Science (B.S.)

 Biomedical Engineering with 4 specialized degree options (biochemical, biomaterials, medical imaging and devices, and biomechanics)

#### Master of Science (M.S.)

- Biomedical Engineering: one-year, non-thesis resident path
- Bioengineering

#### Doctor of Philosophy (Ph.D.)

Bioengineering

Doctor of Philosophy (Ph.D.)/ Doctor of Medicine (M.D.)

• Dual Degree Bioengineering and Medicine

# Faculty (2017-18)





### **Research Labs and Facilities:**

- Active Biomaterials Lab
- Artificial Heart Lab and Cardiovascular Fluid Dynamics Lab
- Biophotonics and Ultrasonics Imaging Lab
- Cellular Biomechanics Lab
- Human Stem Cell Engineering Lab
- Mechanobiology Lab
- Minibio Micro and Nano Integrated Biosystem Lab
- Movement of the Upper Limb and Shoulder Lab
- Multiscale Biomechanics and Mechanobiology Lab
- Musculoskeletal Regenerative Engineering Lab
- Nanotherapeutics and Regenerative Biomaterials Lab
- Pluripotent Stem Cell Engineering Lab
- Precision Therapeutics and Bioresponsive Materials Lab
- Systems and Synthetic Biology Laboratory
- Transformative Biomaterials and Biotechnology Lab
- Translational Neuroimaging and Systems Neuroscience Lab

# University-wide Research Centers and Institutes:

- Clinical Translational Science Institute (CTSI)
- Heart and Vascular Institute
- Huck Institutes of the Life Sciences
- Institute for CyberScience
- Materials Research Institute
- Penn State Cancer Institute
- Penn State Hershey Medical Center
- Social, Life, and Engineering Sciences Imaging Center (SLEIC)

# **Research Areas:**

- Biomechanics
- Biomedical Imaging
- Biomaterials, Drug Delivery, and Nanomedicine
- BioMEMS/NEMS and Medical Devices
- Cell, Molecular, and Systems Bioengineering
- Neural, Immune, and Cardiovascular Engineering
- Tissue Engineering and Regenerative Medicine

**Enrollment (Fall 2017)** 

234 11 56

Undergraduate (Jr./Sr.)

Master's

Ph.D.

# **Outreach Groups**

- Biomedical Engineering Society (BMES)
- Physicians for Human Rights (PHR)
- Women in Engineering Program (WEP)
- Multicultural Engineering Program (MEP)



New Biomedical Engineering and Chemical Engineering Building to be complete in 2019

\$150M 194k+

ESTIMATED TOTAL COST

**ESTIMATED SQ FT** 

chemebiomedbuilding.engr.psu.edu





