Developing clinically translatable solutions for human health by training the next generation of biomedical engineers, cultivating leaders, and nurturing the integration of engineering and medicine in a discovery-centered environment.

Biomedical engineers design diagnostic devices and equipment to detect diseases. They use mathematical and computational skills to analyze actions in the body, such as blood flow, in order to create ventricular assist devices, stents, or artificial organs. Biomedical engineers use advanced computer modeling to develop new drugs used to treat diseases like cancer, cardiovascular disease, diabetes, osteoporosis, and many others.

RESEARCH CENTERS AND INSTITUTES

The Center for Cardiovascular Simulation, directed by Dr. Michael Sacks, provides cardiovascular scientists and clinicians with advanced simulations for the rational development of treatments for cardiovascular disease. ccs.ices.utexas.edu

The Center for Computational Oncology, directed by Dr. Thomas Yankeelov, is involved in research guided by developing a mathematical theory for how cancer initiates, grows, spreads, and responds to treatment.

The Center for Emerging Imaging Technologies, led by Dr. Andrew Dunn, fosters collaborative research on the development and applications of new imaging technologies for biomedical research and clinical medicine. www.ceit.utexas.edu

The Institute for Biomaterials, Drug Delivery, and Regenerative Medicine, led by Dr. Nicholas Peppas, provides a focal point for impactful activities in research, education, and service in biomaterials, drug delivery, and regenerative medicine—key areas in transforming health care. www.ibdr.engr.utexas.edu

RESEARCH AREAS

CELLULAR AND BIOMOLECULAR ENGINEERING

BIOMICROSCOPIC IMAGING AND INSTRUMENTATION

COMPUTATIONAL BIOMICROSCOPIC ENGINEERING AND BIOINFORMATICS

BIOENGINEERING

BIOCHEMISTRY

BIOMECHANICS

The Biomedical Engineering Department offers the most competitive engineering program at UT Austin. Admitted students to our undergraduate program consistently graduate at the top of their high school classes, with an average class rank of top 3 percent.
The Cockrell School of Engineering is ranked the No. 10 Best Engineering School in the World. (ARWU)

The University of Texas at Austin
Biomedical Engineering
Cockrell School of Engineering

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Dr. Shelly Sakiyama-Elbert named new Chair of the Department of Biomedical Engineering, joining UT Austin from Washington University St. Louis.

Dr. George Georgiou and Dr. Thomas Milner named Fellows of the National Academy of Inventors.

Dr. Nicholas Peppas receive the Biomedical Engineering Society’s Pritzker Distinguished Lecture Award.

Dr. James Tunnell and his dermatologist collaborator, Dr. Jason Reichenberg, were among 3 finalist teams out of 33 to receive funding from Dell Medical School’s Texas Health Catalyst for development of a new technology to measure effectiveness of surgical interventions in skin cancer removal.

Dr. Mia Markey’s NIH-funded interdisciplinary breast cancer research to help make the breast reconstruction decision-making process easier for cancer survivors.

A Department of Defense-funded collaboration between Dr. Aaron Baker and Dr. Chong Xie to create a technology combining regenerative gels with flexible ultra-compliant electronic devices that can help patients with nerve injury.

Dr. Jenny Jiang’s discovery of a correlation between aging and the effectiveness of T-cells, and the effects of T-cell affinity in gauging how healthy an immune system is toward a specific antigen, published in Science Translational Medicine.

Dr. Michael Sacks’ NIH-funded advanced cardiovascular simulation research to develop the first detailed computer models to improve bioprosthetic heart valve durability.

Dr. Hyun Jung Kim’s innovative bioinspired approach to improving treatment of Crohn’s disease and IBD by using human gut-on-a-chip systems to learn more about the gut microbiome.

FACULTY AWARDS
14 AIMBE Fellows
4 AAAS Fellows
2 National Academy of Engineering Members
2 National Academy of Medicine Members
3 Member of National Academy of Inventors

RECENT ACCLAMATION AND NEWS
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PATENTS
169 issued to researchers in the last 10 years

RECENT RESEARCH HIGHLIGHTS
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