

DEPARTMENT OF BIOMEDICAL ENGINEERING

<http://engineering.tamu.edu/biomedical> (<http://engineering.tamu.edu/biomedical/>)

Head: M. McShane

Graduate Advisor: T. Ware

The Department of Biomedical Engineering offers several graduate degrees. The PhD and MS programs are research-based and require a thesis, while the MEng degree focuses on preparing students for industry and involves an internship. Through our collaborations with Mays Business School, there is also a Master of Engineering/Master of Business Administration program. For more information, including degree requirements and application deadlines, visit <http://engineering.tamu.edu/biomedical> (<http://engineering.tamu.edu/biomedical/>).

Committed to solving the world's greatest health problems through the exploration of new ideas, integrated research and innovation, the Department of Biomedical Engineering at Texas A&M University is producing the next generation of biomedical engineers in industry and at tier-one research institutions, developing new technologies and new jobs, and achieving revolutionary advancements for the future of health care.

Graduate students in the Department of Biomedical Engineering participate in groundbreaking research in Imaging Technologies, Medical Devices, Regenerative Medicine, and Sensing and Monitoring while interacting with outstanding faculty members who have strong collaborations with the college of science, medicine and veterinary medicine as well as faculty, medical doctors and industry personnel from around the globe.

Doctor of Philosophy

With this degree option, students complete a minimum of 64 or 96 hours on their degree plans. The total number of hours on the degree plan as well as the required number of hours of formal coursework is dependent upon the student's previous degree(s). As part of this research-intensive degree, students will write and defend a dissertation. A PhD requires a committee of four or more graduate level faculty members, including one faculty to act as the primary adviser for each candidate. Students may enter this program with a master's or bachelor's degree in engineering or an equivalent field. (If the degree is not in engineering, leveling courses may be required.) Students entering with only a bachelor's degree will be required to complete a 96-hour degree plan, and students who have earned a master's degree at a U.S. institution will only be required to complete a 64-hour degree plan.

Master of Science

Students interested in an MS degree complete a minimum of 30 hours on their degree plans, of which 24 hours is formal coursework. As part of this research-based degree, students are required to write and defend their final thesis. An MS requires a committee of three or more graduate level faculty members, one of which must act as the primary adviser for each candidate. Students admitted into this program must have a bachelor's degree in engineering or an equivalent field (if the degree is

not in engineering, leveling courses may be required). Students with the ultimate goal of pursuing a PhD should apply directly to the PhD program.

Master of Engineering

The Department of Biomedical Engineering offers an MEng degree in which students complete a minimum of 30 hours on their degree plans, of which 27 hours is formal coursework. Geared toward industry, students in this degree program are required to complete an internship and final project. Students admitted into this program must have a bachelor's degree in engineering or an equivalent field (if the degree is not in engineering, leveling courses may be required.)

ME/MBA Cooperative

In conjunction with Mays Business School, the Department of Biomedical Engineering offers a MEng/MBA degree that allows students to complete both degrees in approximately 2.5 years. This program prepares students for leadership roles in many areas of biomedical engineering and business with specific MBA training in leadership, management, human resources, team building, communications, marketing, finance, accounting, strategy and technology. The program also allows for an optional self-designed specialization for the BMEN student (may require enrollment in additional semesters). The goal of the BMEN/MBA degree program is to produce leaders in biomedical engineering and business. More specific details about the curriculum and degree timeline can be found here. (<https://engineering.tamu.edu/biomedical/academics/degrees/graduate/me-mba.html>)

Certificate Programs

Quality Engineering for Regulated Medical Technologies

Quality engineering principles are mandated by federal and state regulations for clinical facilities and for the design, testing and manufacture of medical technologies, such as pharmaceuticals and imaging, diagnostic and therapeutic devices. Completion of this certificate requires specific instruction in quality engineering and regulation of medical technologies; moreover, candidates must go beyond understanding concepts and demonstrate appropriate usage of quality engineering principles in a medically related internship. Given the challenging demands for both better outcomes and lower costs in medical care, candidates for this certificate are expected to be entering a high-growth job market for engineers.

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Faculty

Adjei, Isaac, Assistant Professor
Biomedical Engineering
PHD, Case Western Reserve University, 2014

Alge, Daniel L, Associate Professor
Biomedical Engineering
PHD, Purdue University, 2010

Avazmohammadi, Reza, Assistant Professor
Biomedical Engineering
PHD, University of Pennsylvania, Philadelphia, PA, 2014

Bagnato, Vanderlei, Professor
Biomedical Engineering
PHD, Massachusetts Institute of Technology, 1987
PHD, Massachusetts Institute of Technology, 1987

Biswas, Saurabh, Associate Professor of the Practice
Biomedical Engineering
PHD, Texas A&M University, 2011

Carrell, Travis, Instructional Assistant Professor
Biomedical Engineering
PHD, Texas A&M University, 2022

Ceylan Koydemir, Hatice, Assistant Professor
Biomedical Engineering
PHD, MIDDLE EAST TECHNICAL UNIVERSITY, 2013

Chimene, David, Research Assistant Professor
Biomedical Engineering
PHD, Texas A&M University, 2019

Chukkapalli, Sasanka, Research Assistant Professor
Biomedical Engineering
PHD, Post Graduate Institute of Medical Education & Research (PGIMER)
Chandigarh, India, 2009

Cote, Gerard L, Professor
Biomedical Engineering
PHD, University of Connecticut, 1990

Criscione, John C, Professor
Biomedical Engineering
MD, The Johns Hopkins University, 1999
PHD, The Johns Hopkins University, 1999

Gaharwar, Akhilesh K, Associate Professor
Biomedical Engineering
PHD, Purdue University, 2011

George, Jason, Assistant Professor
Biomedical Engineering
MD, Baylor College of Medicine, 2020
PHD, Rice University, 2019

Gibbs, Holly, Research Assistant Professor
Biomedical Engineering
PHD, Texas A&M University, 2015
PHD, Texas A&M University, 2014

Ginn-Hedman, Anne-Marie, Instructional Assistant Professor
Biomedical Engineering
PHD, Texas A&M University-College Station, 2022

Graul, Meghan, Instructional Assistant Professor
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PHD, Texas A&M University, 2022

Grunlan, Melissa A, Professor
Biomedical Engineering
PHD, University of Southern California, 2004

Hanks, John, Professor of the Practice
Biomedical Engineering
MS, University of Texas, Austin, 1989

Haridas, Balakrishna, Professor of the Practice
Biomedical Engineering
PHD, University of Cincinnati, 2001

Horn, John, Instructional Assistant Professor
Biomedical Engineering
PHD, Texas A&M University, 2018

Hwang, Wonmuk, Professor
Biomedical Engineering
PHD, Boston University, 2001

Jafari, Roozbeh, Professor
Biomedical Engineering
PHD, University of California, Los Angeles, 2006

Jain, Abhishek, Associate Professor
Biomedical Engineering
PHD, Boston University, 2012

Jessen, Staci, Research Assistant Professor
Biomedical Engineering
PHD, Texas A&M University, 2016

Kaunas, Roland R, Associate Professor
Biomedical Engineering
PHD, University of California at San Diego, 2003

Lele, Tanmay, Professor
Biomedical Engineering
PHD, Purdue University, 2002

Ligler, Frances, Professor
Biomedical Engineering
DOC, Oxford University, Oxford, UK, 2000
PHD, Oxford University, Oxford, UK, 1977

Mabbott, Samuel, Assistant Professor
Biomedical Engineering
PHD, University of Manchester, Manchester Interdisciplinary Biocentre,
2012

Maitland IV, Duncan J, Professor
Biomedical Engineering
PHD, Northwestern University, 1995

McDougall, Mary P, Associate Professor
Biomedical Engineering
PHD, Texas A&M University, 2004

McShane II, Michael J, Professor
Biomedical Engineering
PHD, Texas A&M University, 1999

Patrick, Charles, Professor of the Practice
Biomedical Engineering
PHD, Rice University, 1994

Peak, Charles W, Instructional Assistant Professor
Biomedical Engineering
PHD, Texas A&M University, 2018

Raghavan, Shreya, Assistant Professor
Biomedical Engineering
PHD, Virginia Tech-Wake Forest University School of Biomedical Engineering and Sciences, 2014

Reynolds, Jeffery, Professor Of The Practice
Biomedical Engineering
PHD, Purdue University, 1996

Tian, Limei, Assistant Professor
Biomedical Engineering
PHD, Washington University in St. Louis, 2014

Walsh, Alexandra, Assistant Professor
Biomedical Engineering
PHD, Vanderbilt University, 2015

Ware, Taylor, Associate Professor
Biomedical Engineering
PHD, University of Texas at Dallas, 2013

Yakovlev, Vladislav V, Professor
Biomedical Engineering
PHD, Moscow State University, 1990

Zhao, Feng, Associate Professor
Biomedical Engineering
PHD, Tianjin University, 2001

Masters

- Master of Engineering in Biomedical Engineering (<http://catalog.tamu.edu/graduate/colleges-schools-interdisciplinary/engineering/biomedical/meng/>)
- Master of Science in Biomedical Engineering (<http://catalog.tamu.edu/graduate/colleges-schools-interdisciplinary/engineering/biomedical/ms/>)

Doctoral

- Doctor of Philosophy in Biomedical Engineering (<http://catalog.tamu.edu/graduate/colleges-schools-interdisciplinary/engineering/biomedical/phd/>)

Certificates

- Quality Engineering for Regulated Medical Technologies Certificate