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.

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.

For more information, including degree requirements and application deadlines, visit http://engineering.tamu.edu/biomedical (http://engineering.tamu.edu/biomedical/).

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

Biswas, Saurabh, Associate Professor of the Practice
Biomedical Engineering
PHD, Texas A&M University, 2011
Cote, Gerard L, Professor  
Biomedical Engineering  
PHD, University of Connecticut, 1990

Criscone, 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

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

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

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

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

Jessen, Staci, Lecturer  
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

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

Maitland, Kristen D, Associate Professor  
Biomedical Engineering  
PHD, The University of Texas at Austin, 2006

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

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

Yeh, Alvin T, Associate Professor  
Biomedical Engineering  
PHD, University of California at Berkeley, 2000

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

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**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