DEPARTMENT OF BIOMEDICAL ENGINEERING

http://engineering.tamu.edu/biomedical

Head: M. McShane
Graduate Advisor: R. Kaunas

The Department of Biomedical Engineering offers several graduate degrees. The Ph.D. and M.S. programs are research-based and require a thesis, while the M.Eng. 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/.

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 Ph.D. 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 M.S. degree complete a minimum of 32 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 M.S. 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 M.Eng. 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 M.Eng./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, teambuilding, 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 medical 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/.

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

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

Bukkapatnam, Satish T, Professor
Biomedical Engineering
PHD, Pennsylvania State University, 1997

Clubb Jr, Fred J, Professor
Biomedical Engineering
PHD, University of Alabama - Birmingham, 1983
DVM, Auburn University, 1971

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

Criscione, John C, Professor
Biomedical Engineering
PHD, The John Hopkins University School of Medicine, 2005

Fink, Rainer J, Associate Professor
Biomedical Engineering
PHD, Texas A&M University, 1995

Freed, Alan D, Professor
Biomedical Engineering
DEN, University of Wisconsin - Madison, 1985

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

Gibbs, Holly C, Lecturer
Biomedical Engineering
PHD, Texas A&M University, 2015

Gonezen, Sevan, Assistant Professor
Biomedical Engineering
PHD, Rensselaer Polytechnic Institute, 2011

Gregory, Carl A, Assistant Professor
Biomedical Engineering
PHD, University of Manchester, 1999

Grunlan, Melissa A, Professor
Biomedical Engineering
PHD, University of South Carolina, 2004

Guiseppi Elie, Anthony, Professor
Biomedical Engineering
PHD, Massachusetts Institute of Technology, 1983
DVM, University of the West Indies, Mona, Jamaica, 1979

Han, Arum, Professor
Biomedical Engineering
PHD, Georgia Institute of Technology, 2005

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

Hogan, Harry A, Associate Professor
Biomedical Engineering
PHD, Texas A&M University, 1984

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

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

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

Jayaraman, Arul, Professor
Biomedical Engineering
PHD, University of California, Irvine, 1998

Jessen, Staci, Lecturer
Biomedical Engineering
PHD, Texas A&M University, 2016

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

Keller, Brandis K, Lecturer
Biomedical Engineering
PHD, Politecnico di Milano, 2013

Lawley, Mark A, Professor
Biomedical Engineering
PHD, University of Illinois at Urbana-Champaign, 1995

Mabbutt, 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, University of Texas, 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

Moreno, Michael R, Assistant Professor
Biomedical Engineering
PHD, Texas A&M University, 2009

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
Certificates

- Quality Engineering for Regulated Medical Technologies Certificate

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/)