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, developing new technologies and new jobs, and achieving revolutionary advancements for the future of health care.

**Rankings**

*U.S. News & World Report, 2012*

- Graduate – 14th among public institutions (30th overall)

**Faculty**

- 17 tenured/tenure-track faculty
- 3 endowed professorships
- 4 research professors, 11 jointly appointed faculty members
- 9 editorships and editorial board memberships
- 50 memberships in professional societies
- 6 Fellow grades in professional societies
- 2 national/international-level awards
- 2 authored adapted textbooks

**Areas of Study**

- Biomaterials
- Biomechanics
- Biomedical Electronics and Instrumentation
- Biomedical Imaging
- Biomedical Signal Processing
- Biophotonics
- Cardiac, Vascular and Cellular Mechanics
- Computational Mechanics
- Computer Simulation of Biomolecules
- Constitutive Modeling
- Magnetic Resonance Imaging
- Nano and Micro Biosensing and Imaging
- Nonlinear Optical Microscopy
- Nonlinear Solid Mechanics
- Optical Diagnostics
- Optical Imaging
- Optical Sensing
- Orthopedic Rehabilitation Engineering
- Polymer Colloids and Hydrogels
- Soft Tissue Biomechanics
- Tissue Engineering

**Research**

Our research has resulted in new patents, new companies and new economic activity. With increasing demands for quality medical devices, procedures and improved cost-effectiveness, we are positioned to lead the way in the development, testing and commercialization of products, systems and technologies.

**$5.5 M in Research Expenditures** (2011)

- 10 start-up companies created, 64 patents & disclosures filed
- 73 refereed journal papers in 2011
- 78 selective conference papers in 2011

**Students**

*ABET accredited since 1977, the biomedical engineering program at Texas A&M has awarded B.S., M.S. and Ph.D. degrees since 1973 and has many former students in high-level positions in industry, academia and government.*

**Enrollment** (Fall 2012)

- Undergraduate — 417
- Graduate — 113
- Total Enrollment — 530

**Degrees Awarded** (Fall 2011, Spring 2012, August 2012)

- Bachelor’s — 62
- Master’s — 6
- Ph.D. — 9
- Bachelor’s degrees to women — 19
- Bachelor’s degrees to men — 43

**Diversity**

- Undergraduate — 43.2% female, 33% minority
- Graduate: — 32.5% female, 20.5% minority

biomed.tamu.edu
Facilities

The $104 million, 212,000-square-foot Emerging Technologies Building for interdisciplinary engineering education, research and service houses two major engineering and research departments, offices, state-of-the-art computer-based classrooms and laboratories, wet laboratories, and a large-scale visualization room. This certified Leed Silver Sustainable Building is energy efficient and designed to utilize open space to encourage collaboration and discovery.

Select Capabilities and Resources

- 9 classrooms, each with seating for 40-100
- 80-station computer laboratory
- 12 National Instruments ELVIS, 2 in undergraduate dry laboratory
- 3 wet lab floors comprise 28 biomedical engineering research wet labs, 38 functioning fume hoods and 12 biosafety cabinets
- 4 teaching laboratories and 5 shared research laboratories
- Biofabrication laboratory with UV lithography, Scanning Electron Microscope (SEM) and Atomic Force Microscope (AFM)
- Imaging histology, molecular biology laboratory with microplate reader, vibrotome, inverted brightfield/phase/fluorescence microscope and automated slide scanner
- Biomaterials preparation and characterization shared research laboratory with HPLC with mass spectrometer, ellipsometer, contact angle goniometer
- Biosafety Level 2 (BL-2) cell and tissue culture lab with biosafety cabinets, incubators, -80, -20, 4C storage, autoclaves, confocal microscope
- Prototyping laboratory with Gravograph laser engraving system, Resonetics Excimer laser system
- HPLC with gas mass spectrometer and gas chromatograph
- Biomechanics teaching laboratory with Instron machines for testing strength and stretching capabilities
- Machining and device shop with Monarch lathe & Bridgeport milling machine

Centers and Laboratories

- Biomaterials Testing Laboratory
- Biomedical Micro/Nanoscale Devices Laboratory
- Cardiac Biomechanics Laboratory
- Cellular Biomechanics Laboratory
- Continuum Biomechanics Laboratory
- Medical Service Systems Safety Laboratory
- Molecular Biomechanics Laboratory
- Optical Biosensing Laboratory
- Optical Imaging Laboratory
- Rehabilitation Engineering Laboratory
- Soft Tissue Biomechanics Laboratory
- Tissue Microscopy Laboratory