

SCHOOL OF ENGINEERING MEDICINE

The School of Engineering Medicine (EnMed), situated in the heart of Houston's Texas Medical Center, offers a transformative four-year program that uniquely combines a master's of engineering with a medical doctorate, preparing future leaders to revolutionize healthcare through innovative medical technologies. Through hands-on clinical experience and rigorous engineering training, we develop 'physicianeers' – a new generation of physicians.

The School's mission is to train and equip a distinct class of medical professionals with expertise in both medicine and engineering who are driven to design innovative, practical, and impactful solutions to revolutionize healthcare. The School's innovative medical curriculum uniquely blends medical and engineering sciences with biodesign principles, offering the only simultaneous master's of engineering and medical doctorate program completed in four years.

EnMed is an educational, research, and translational collaborative venture between Texas A&M University's Colleges of Engineering and Medicine, and the top-ranked Houston Methodist Hospital.

The School of Engineering Medicine offers a learning community which:

- Educates invention-and innovation-minded physician engineers (physicianeers).
- Provides clinical training at the top-ranked Houston Methodist Hospital.
- Offers experience in translating novel medical technologies into real-world applications.
- Focuses on invention, innovation and entrepreneurship
- Provides graduates both a Doctor of Medicine (MD) and a Master's of Engineering (MEng) degree.

Learn more about the School of Engineering Medicine at <https://enmed.tamu.edu/>.

Leadership

The School of Engineering Medicine is guided by administrators, faculty, and staff who are highly committed to creating an exciting learning environment, establishing innovative clinical collaborations, and launching new discoveries with a global healthcare impact.

Through visionary leadership, the School of Engineering Medicine brings together the problem-solving abilities and research expertise of engineers with the unique insights and skills of medical professionals who have a direct understanding of patient, provider, and market needs. EnMed leaders believe that strong academic, clinical, and industrial collaborations promote hands-on learning and drive the development and implementation of cutting-edge technologies.

Dr. Timothy B. Boone serves as the Interim Dean for Texas A&M's School of Engineering Medicine. He is a Professor of Urology and holds the Craig C. Brown and Suzanne H. Smith Centennial Chair in Medical Education at Houston Methodist. He is the former Chief Education Officer for the Houston Methodist Hospital System and a member of the Neurological Institute. Dr. Boone served as Director of the Education Institute at Houston Methodist and Associate Designated Institutional Official helping establish 3 new GME programs at regional hospitals.

He established Houston Methodist as a clinical campus for Texas A&M College of Medicine in 2016 and partnered to develop and implement the Texas A&M School of Engineering Medicine.

Learn more about Dr. Boone and EnMed leadership by visiting <https://enmed.tamu.edu/enmed-leadership/>.

Degree Requirements

Students may choose to focus on the development of a device, computer software, medical test, diagnostic process, treatment process, drug development, or any other need that exists in the vast medical and pharmaceutical industries. The curriculum within the EnMed combination program is a tailored program of study that meets all program requirements for each degree utilizing didactic, blended, and experiential learning. All coursework is taken concurrently.

Learn more about the Master of Engineering in Engineering and Doctor of Medicine Combined Degree Program (<https://catalog.tamu.edu/graduate/colleges-schools-interdisciplinary/engineering/interdepartmental-degree-programs/men-md/#text>).

Admissions Requirements

The School of Engineering Medicine seeks highly qualified and exceptionally motivated applicants who demonstrate the passion and integrity to become outstanding physicians, creative innovators, and exceptional community leaders.

Applicants to the the School of Engineering Medicine must:

- Have a degree in engineering or computer science from an ABET accredited (or standards meeting) institution; including at least 90 credit hours of coursework at a U.S. accredited college or university.
- Be a U.S. citizen or hold a U.S. Permanent Resident (Green Card) status.
- Have completed all prerequisite coursework (<https://medicine.tamu.edu/degrees/md/requirements.html#requirements-courses>) to qualify for EnMed admission.
- Complete the Medical College Admissions Test (MCAT).
- Complete all prescribed coursework before being accepted into the program.

Learn more at <https://enmed.tamu.edu/admissions/>.

Professionalism

Students entering a formal graduate and medical education program are expected to uphold and adhere to advanced ethical and behavioral standards. The development and maintenance of a professional attitude is an ongoing responsibility of each student. Evaluation of professional behavior is an integral part of the curriculum and will be a factor in assigning grades and determining promotion, retention or dismissal.

Faculty

Baxter, Douglas, Instructional Professor
School of Engineering Medicine
PHD, University of Texas, 1981

Benjamin, Chandler C, Assistant Professor
School of Engineering Medicine
PHD, University of Wisconsin, Madison, 2017

Black, Lance, Professor of the Practice
School of Engineering Medicine
MD, Louisiana State University Health Sciences Center-New Orleans,
2006

Boone, Timothy, Clinical Professor
School of Engineering Medicine
MD, The University of Texas Health Science Center at Houston, 1985
PHD, The University of Texas Health Science Center at Houston, 1985

Day, Leslie, Instructional Professor
School of Engineering Medicine
PHD, Northeastern University, 2005

Ganguly, Nivedita, Instructional Assistant Professor
School of Engineering Medicine
MD, Jawaharlal Neru Medical College, 1991

Gibson, Jeremy L, Instructional Professor
School of Engineering Medicine
MD, The University of Texas Medical Branch at Galveston, 1998

Hughes, Rhome, Instructional Associate Professor
School of Engineering Medicine
MD, UT Southwestern Medical Center, 2006

Lee, Rebecca Wei, Instructional Assistant Professor
School of Engineering Medicine
MD, University of Texas Medical School at Houston, 2012

Lovelady, April, Instructional Associate Professor
School of Engineering Medicine
PHD, Texas A&M University, 2012

Meyer, Geoffrey, Visiting Instructional Professor
School of Engineering Medicine
PHD, The University of Western Australia, 1982

Moczygemba, Margie M, Research Associate Professor
School of Engineering Medicine
PHD, State University of New York at Stony Brook, 1997

Moreno, Michael R, Associate Professor
School of Engineering Medicine
PHD, Texas A&M University, 2009

Muthupillai, Raja, Research Professor
School of Engineering Medicine
PHD, Mayo Graduate School, 1997

Omoumi, Farid H, Instructional Assistant Professor
School of Engineering Medicine
MD, Tabriz University of Medical Science, 2003
PHD, The University of Oklahoma, 2022

Paolini, Michael Adam, Instructional Assistant Professor
School of Engineering Medicine
MD, Baylor College of Medicine, 2014

Peterson, Thomas Vincent, Instructional Professor
School of Engineering Medicine
PHD, The University of Oklahoma, 1977

Pettigrew, Roderic, Professor
School of Engineering Medicine
PHD, Massachusetts Institute of Technology, 1977

Priya, Prachi, Instructional Assistant Professor
School of Engineering Medicine
MD, Maharaja Krishnakumarsinhji Bhavnagar University, 2016

Rogers, Sara, Clinical Assistant Professor
School of Engineering Medicine
PHARMD, University of Houston, 2012

Shah, Ruby Preeti, Instructional Assistant Professor
School of Engineering Medicine
MD, Baylor College of Medicine, 2008

Slivkoff, Mark, Instructional Associate Professor
School of Engineering Medicine
PHD, New Mexico State University, 2001

Wilson, John Samuel, Instructional Associate Professor
School of Engineering Medicine
MD, University of Texas Southwestern Medical School, 2007
PHD, Yale University, 2015

Yadav, Kamlesh, Instructional Associate Professor
School of Engineering Medicine
PHD, New York University, 2011

Yeh, Paul, Instructional Assistant Professor
School of Engineering Medicine
MD, University of Texas School of Medicine at San Antonio, 2016
DrPH, The University of Texas Health Science Center at Houston, 2023