Graduate Curriculum

Ph.D. students must complete 27 semester hours of courses approved by the program faculty, excluding seminar, research and teaching hours. Within the required 27 hours is a modular sequence of 12 one credit hour courses that are taken within the first two semesters. After the first year, all Ph.D. candidates must take the preliminary exam given by the department.

Financial Assistance

Financial awards are available in several forms, such as University Fellowships, Graduate Teaching Assistantships, Graduate Research Assistantships and Traineeships. Virtually all students who are admitted based on merit are offered a financial support package. The financial support package typically consists of a competitive stipend, a tuition waiver and full health insurance coverage. Students interested in financial assistance should check the appropriate box under “Financial Information” on the online application.

Information online: www.vanderbilt.edu/gradschool

About Vanderbilt & Nashville

A private research university, Vanderbilt was founded in 1873 and named for Cornelius Vanderbilt, who provided the school its initial $1 million endowment. Vanderbilt enrolls approximately 12,000 students from all 50 U.S. states and over 90 foreign countries in four undergraduate and six graduate and professional schools. Several research centers and institutes are affiliated with the university, including the Vanderbilt Institute for Public Policy Studies, Freedom Forum First Amendment Center, Dyer Observatory, and Vanderbilt University Medical Center, the only Level I trauma center in Middle Tennessee.

Vanderbilt’s hometown of Nashville (population of the Nashville Metropolitan Statistical Area is 1,582,264) is a vibrant, engaging city known proudly as “Music City, U.S.A.” The Bridgestone Arena is home to the National Hockey League team, the Nashville Predators. The National Football League’s Tennessee Titans’ home is LP Field in downtown Nashville. Vanderbilt is located a little more than a mile from downtown and the university’s students, faculty, staff and visitors frequently cite Nashville as one of the perks of Vanderbilt.

Important Dates

- October 22: Last date to take paper-based general GRE
- November 19: Last date to take TOEFL (Internationals)
- December 1: Last date to take computer-based general GRE
- January 15: Application deadline, including all supporting credentials
- February 15: Admission offers made
- April 15: Deadline to accept admission

Contact

W. David Merryman, Ph.D., Director of Graduate Recruiting, Biomedical Engineering
Room 5024B, Stevenson Center, VU Station B #351631, Nashville, TN 37235-1631, Phone: (615) 322-7219, Fax: (615) 343-7919
email: david.merryman@vanderbilt.edu | http://engineering.vanderbilt.edu/BiomedicalEngineering.aspx
Cellular Sensing and Control
Franz Baudenbacher, Ph.D., Cardiac arrhythmogenesis, excitation-contraction coupling and bioenergetics, bioinstrumentation and bioMEMs
http://www.vanderbilt.edu/viibrebaudenbacher.html
W. David Merriman, Ph.D., Cardiovascular mechanobiology and tissue engineering, cell and tissue mechanics, and fibroblast mechanotransduction
http://research.vuse.vanderbilt.edu/mechanobiology/
John P. Wikswo, Ph.D., Biological physics, cardiac electrophysiology, cellular instrumentation and control, electromagnetism, SQUID magnetometry, systems biology
http://www.vanderbilt.edu/viibreb

Medical Devices and Modeling
Robert L. Galloway Jr., Ph.D., Technology-guided therapy, medical imaging
http://www.tgt.vanderbilt.edu/index.htm
Michael Miga, Ph.D., Biomedical modeling, tissue biomechanics, numerical methods, technology-guided therapy, medical image analysis
http://bmweb.vuse.vanderbilt.edu/

Biomedical Photonics
E. Duco Jansen, Ph.D., Laser-tissue interaction, cellular effects of laser energy, application of light, lasers and optical technology in medicine and biology, optical stimulation of neural tissue
http://www.bme.vanderbilt.edu/bmephotonics/index.htm
Anita Mahadevan-Jansen, Ph.D. Biomedical photonics, diagnosis with optical spectroscopy and imaging, optical guidance of therapy, neurophotonics
http://www.bme.vanderbilt.edu/bmephotonics/index.htm
Melissa Skala, Ph.D. Optical imaging of cancer, optical spectroscopy, nanotechnology, cancer diagnosis & therapy
http://research.vuse.vanderbilt.edu/skalalab/

Medical Imaging
Adam W. Anderson, Ph.D., Magnetic resonance imaging (MRI) of the brain, diffusion tensor imaging, high field MRI
http://vuiis.vanderbilt.edu/
Mark D. Does, Ph.D., Magnetic resonance imaging, small animal imaging, water diffusion and NMR relaxation in tissue
http://vuiis.vanderbilt.edu/
John C. Gore, Ph.D., Development and application of imaging science, magnetic resonance imaging and spectroscopy and molecular imaging
http://vuiis.vanderbilt.edu/
Cynthia B. Paschal, Ph.D., Magnetic resonance angiography, magnetic resonance imaging of lungs
http://vuiis.vanderbilt.edu/

Nanomedicine and Biomaterials
Craig L. Duvall, Ph.D., Intracellular delivery of biomacromolecular drugs, biomaterials for regenerative medicine, RAFT polymerization, stimuli responsive polymers
http://research.vuse.vanderbilt.edu/biomaterials/Duvall/index.html
Todd D. Giorgio, Ph.D., Nanomedicine, multifunctional biosensors, gene therapy, biologically responsive nanomaterials
http://www.vanderbilt.edu/nanomedicine/chioccioliab_home.php
Frederick R. Haselton, Ph.D., Intracellular engineering, endothelial cell function, gene therapy physiological transport phenomena
http://www.vanderbilt.edu/nanomedicine/haseltonlab_home.php
Hak-Joon Sung, Ph.D., Combinatorial biomaterials and biointerfaces, stem cell and vascular engineering, tissue engineering
http://research.vuse.vanderbilt.edu/sung_research/