Health care is changing rapidly, moving toward more technological approaches to diagnosis (such as body scanners and biosensors), treatment (including targeted therapy, minimally invasive surgery, and implantable devices), personalized and regenerative medicine, and the extensive use of information technology. Biomedical engineering is steadily becoming the world’s largest industrial sector, and as a result, there is an increasing demand both for doctors who are technically competent and for engineers who are properly trained in basic medical science.

To help meet these needs, we take advantage of the A. James Clark School of Engineering’s location in a metropolitan area that is home to an expansive number of health care facilities, medical schools, biomedical research centers, and federal regulatory agencies. We have established relationships with the National Institutes of Health (including the National Institute of Biomedical Imaging & Bioengineering and the National Cancer Institute), the Institute for Bioscience & Biotechnology Research, the National Science Foundation, the U.S. Food and Drug Administration, the Environmental Protection Agency, and the U.S. Department of Agriculture; educational institutions such as the University of Maryland Baltimore (UMB) Schools of Medicine, Dentistry, and Pharmacy, as well as other universities locally and nationally. Our growing interdisciplinary faculty is dedicated to expanding our research collaborations.

We are also dedicated to the vision of engineering entrepreneurship—getting science out of the lab and into the hands of doctors, care providers and consumers. Our collaboration with Canon U.S. Life Sciences (http://www.bioe.umd.edu/research/canon) seeks to develop a highly automated system providing rapid infectious disease diagnosis, and we are a founding member of the FDA-funded Maryland Center of Excellence in Regulatory Science and Innovation (http://www.bioe.umd.edu/research/fda), which focuses on modernizing and improving the ways drugs and medical devices are reviewed and evaluated.

We have a view of the human condition that is unlike many bioengineering and biomedical engineering departments in the country. Our thoughts and ideas are grounded first in biology. Our faculty and students think about biological systems: how they work, how they function, and how they interact with their environments. They think about how nature organizes information and materials into molecules, cells, tissues, organisms and ecosystems that sense and respond to physical and chemical cues. They try to understand processes that go astray, like those involved in disease. Armed with this knowledge, they use engineering principles to develop new technologies and devices that will change lives and improve human health throughout the world.
planning for study abroad, C. A. R. E (academic probation), double-major/!
double-degree planning, graduation audit (seniors), and additional help
with four-year planning.

For departmental advising, please send an email including your name,
UID, and general question to bioe-undergrad@umd.edu. All students
seeking advising should read and make sure that they understand the
policies and requirements stated in the BIOE Undergraduate Handbook
(http://www.bioe.umd.edu/undergraduate/advising/references).

College Advising
The Clark School of Engineering’s Office of Undergraduate Advising
and Academic Support (UA&AS) (https://eng.umd.edu/undergraduate-
advising-academic-support-uaas) (http://www.eng.umd.edu/advising)
also provides a broad range of services and support for engineering
students. Some policies are the oversight of the College, so your faculty
or departmental advisor may at times refer you to a Clark School advisor.
For example, transfer admission/transfer credit, 45-credit benchmark
review, and permission to enroll at another institution are handled by the
College.

Opportunities
Undergraduate Research Experiences
The Bioengineering Department offers a two-year research based
Bioengineering Undergraduate Honors program. Interested students
should apply to the honors program in the spring of their sophomore
year. Those accepted into the program will begin research in their
junior year. For more information please see: http://www.bioe.umd.edu/
undergraduate/honors

The Maryland Center for Undergraduate Research also assists
students in finding on and off campus research opportunities
www.ugresearch.umd.edu.

Honors Program
The Fischell Department of Bioengineering Undergraduate Honors
Program is a research-oriented, thesis-based enrichment experience
that serves to augment the curriculum by providing practical, hands-
on learning opportunities. The primary goal of the Honors program is
to develop BIOE graduates who will be among the most competitive
applicants for graduate and medical school programs, as well as
industry jobs. Toward this end, the program provides exceptional
undergraduate students with training in academic and professional
pursuits while offering a formal mechanism to be recognized for scholarly
achievements.

For more information, including program admission and completion
requirements, see http://bioe.umd.edu/undergraduate/honors

Student Societies and Professional
Organizations
BMES-UMD is the University of Maryland, College Park chapter of the
Biomedical Engineering Society (BMES). BMES-UMD’s mission is to unite
and promote the future of the biomedical engineering profession; and
to offer rising biomedical engineers the chance to establish leadership,
publish their work, and participate in a wide range of activities that will
enhance their careers. For more information, visit umdbmes.weebly.com
(http://umdbmes.weebly.com)

Alpha Eta Mu Beta (AEMB) is the National Biomedical Engineering
Honor Society, and the University of Maryland Fischell Department
of Bioengineering established its chapter in spring 2015. For more
information, visit umaemb.weebly.com (http://umaemb.weebly.com).

Scholarships and Financial Assistance
The University and the A. James Clark School of Engineering offer a
range of financial support to talented undergraduate students enrolled at
the School. Offerings include the A. James Clark Endowed Scholarship
fund and the Benjamin T. Rome Scholarship. Our program is competitive,
with awards made on the basis of merit, financial need, and other
factors. For more information on a variety of scholarships, please visit
www.ursp.umd.edu

In addition, the Office of Student Financial Aid (OSFA) administers all
types of federal, state and institutional financial assistance programs
and, in cooperation with other university offices, participates in the
awarding of scholarships to deserving students. For information, please
visit www.financialaid.umd.edu

We also have several departmental annual awards and scholarships for
which students may apply and be selected based on their scholastic
achievements, service to the department and the profession. These
award are open to juniors and seniors in the program. Information on
these annual awards and scholarship may be obtained from the faculty
advisors in the department.

Awards and Recognition
• Fischell Dept of Bioengineering Outstanding Junior Award
• Fischell Dept of Bioengineering Outstanding Senior Award
• Fischell Dept of Bioengineering Outstanding Research Award
• Fischell Dept of Bioengineering Outstanding Leadership Award
• Fischell Dept of Bioengineering Outstanding Citizen Award
• Seymour & Faye Wolfe Scholarship: Bioengineering student
• Jeffrey C. and Sandra W. Huskamp Scholarship: Bioengineering student