UNIVERSITY of WASHINGTON

W | BIOENGINEERING

Bioengineers address unmet challenges in biology, health and medicine to improve lives around the world.

Bioengineering is a uniquely interdisciplinary field bridging engineering, biology, physical science and medicine. Students gain the tools, opportunities and experiences needed to work in multidisciplinary teams, and work on real-world health innovation design projects brought by clinical or industry partners, or by bioengineering faculty research labs.

What makes bioengineering special?

Students are placed in a cohort and progress sequentially through a core curriculum, with opportunities for hands-on research. UW BioE faculty and graduate students mentor our students in core and elective classes, and during their senior capstone project. Seniors engage in an independent or team-based research and design capstone.

The UW student chapter of BMES, the professional bioengineering society, builds an inclusive community through social, service and academic events. Students can also make an impact through numerous clubs and through service on department committees. Bioengineers Without Borders, HuskyADAPT, BioExplore, and iGEM offer students a chance to incorporate classroom learning to solve real-life community challenges.

What problems are bioengineers trying to solve?

Bioengineers make a difference in healthcare. They integrate creative ideas to solve open-ended problems in biology, health and medicine. Bioengineers work in diverse areas, including:

Neurorehabilitation.

To improve the limited and minimally effective treatment options for neurological disorders like stroke and epilepsy, bioengineers:

- Work to better understand the neural mechanisms that cause these disorders.
- Invent technologies to rehabilitate and ultimately cure these conditions.

Diagnosing and treating disease.

In search of ways to reduce the global burden of diseases like HIV, tuberculosis, flu and cancer, bioengineers:

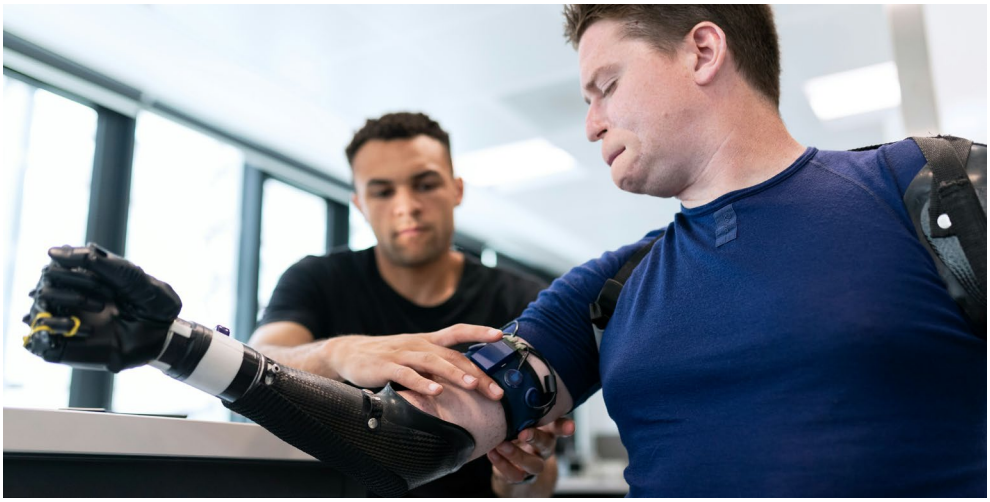
- Develop ways to detect disease earlier, faster and inexpensively.
- Work to create and deliver more effective drugs right where needed.

Heart and organ failure.

Heart attacks cause irreversible damage. As they seek to repair damaged organs, bioengineers:

- Drive advances to regenerate tissue and grow human organs from scratch.
- Engineer artificial tissues and design medical devices that the body does not reject.

WHERE DO BIOENGINEERING ALUMNI WORK?



Industry and consulting

Around half of graduates work as engineers (application, biomedical, project, system, software, test), scientists (research, process development) and analysts (business, MRI, systems, analysts for innovations).

Accenture
Allen Institute for Brain Science
Anteris Technologies
Deloitte
EKOS
GE Healthcare
Johnson & Johnson
Just Biotherapeutics
Pacific NW National Laboratory
Philips
Sage Bionetworks
Seattle Children's
St. Jude Medical
Seattle Genetics
SonoSite
Stryker
U.S. Food and Drug Administration

Medical school and health-related degrees

Many become successful medical, dental, pharmacy and osteopathic students and well-rounded healthcare professionals.

Columbia Medical School
Duke University
Harvard
Johns Hopkins
Northwestern
Stanford
Uniformed Services University
UCLA
University of Illinois
University of Pennsylvania
UW Medicine and Dentistry
Yale School of Medicine

Graduate education

Graduates are accepted to a broad range of top-rated national and international programs, such as law, business, public health, thesis and applied master's, and Ph.D. programs.

Carnegie Mellon
Georgia Tech
Harvard
MIT
Northwestern Kellogg School of Management
Stanford
University of Michigan
University of Pennsylvania Wharton School
UW Foster School of Business and School of Law

STUDENT DESIGN PROJECTS

Recent projects include:

+ Developing New Point-of-Care Detection for COVID-19
+ Heart Disease in a Dish: Improving Resistance of Engineered Heart Tissues
+ Improved Devices to Collect DNA Samples
+ MyHeart Mobile Application to Monitor Heart Health
+ HIV Drug Resistance Testing Device
+ 3D Printed Rods with Electrical Stimulation for Promoting Spinal Fusion

QUICK FACTS

More than 70% of our students participate in undergraduate research.

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BioE students join a cohort at the end of sophomore year, and progress together to graduation.

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Past students are Goldwater, Luce, Rhodes & Gates Cambridge scholars; Fulbright fellows; Bonderman fellows; Engineering Dean's Medalists and more.

How can you learn more?

If you think UW BioEngineering might be a good fit for you, there are many opportunities to explore. Consider taking one of these non-major classes:

BIOEN 215: Introduction to Bioengineering Problem Solving

ENGR 115: Engineering Transformation of Health

BIOEN 299: Introduction to Bioengineering,

BIOEN 509: Bioengineering Departmental Seminar.