



ROSE-HULMAN
INSTITUTE OF TECHNOLOGY



**Biomedical
Engineering**



"We empower students to set their own course and craft their own adventures to realize their personal goals and career aspirations. It's all about the journey that a student wants to take."

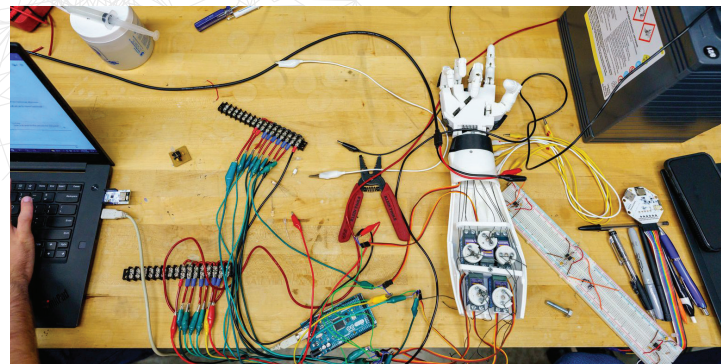
- Dr. Bill Weiner, PhD
Head, Biology and Biomedical
Engineering Department

What makes Rose-Hulman's Biomedical Engineering unique?

An extensive design component, starting in the first academic quarter, is a core feature of our biomedical engineering degree program. Other elements include communication and leadership development, along with background in regulatory affairs and physiology – all led by a skilled and caring faculty and staff.

You will learn technical and professional skills that are applied to relevant project-based challenges. First-year courses center on teaching design thinking and communications, realization, and human-centered products. Design methodologies, leadership and teamwork are covered in the second year, and medical device research and design are part of the third year. That will prepare you to work in teams for a five-quarter-long and real-world capstone design project that examines problem definition, prototyping, construction, verification, and user validation – replicating industry practices.

It all culminates with unique customized coursework that aligns with your career goals.



Experiential Learning

A biomedical engineering degree from Rose-Hulman allows you enter the job market or graduate school with the skills needed to build a successful and meaningful career. In particular, your degree in biomedical engineering will give you:

- an understanding of the theories and concepts of biology, mathematics, physical science, and engineering science essential to being a successful biomedical engineer.
- the practical and technical skills required for biomedical engineering practice.
- the skills to communicate effectively with people in and out of your field.
- the flexibility to choose the area of specialization for your biomedical engineering degree.
- the skills to apply design principles to open-ended problems.

Hands-On Projects that Make a Difference

The learning process is enhanced when the students are actively involved and can see the results of their work through a finished product. Second-year students in a Design Methodologies course have received valuable feedback on past prosthetic biomedical device designs from children at the Terre Haute Children's Museum. Meanwhile, another museum project had third-year students creating a space station exhibit that had features specially designed to be educational and fun for children with sensory processing disorders. Capstone projects have included the development of biometric feedback stirrups for equine-assisted physical therapy, an assistive rocking chair for a client with Duchenne muscular dystrophy, and several products for a major orthopedic implant company.



“Design skills within our program are built year to year, with continuous educational touch points, to ensure students have the skillsets required for careers in medical device research and product development.”

— Dr. Renee Rogge, PhD
Professor of Biomedical Engineering

AIMing for Career Success

The Advanced Individualized Mission (AIM) within the biomedical engineering curriculum allows students to customize advanced coursework to correspond with their career goals, with the approval of a departmental faculty committee.

For instance, those interested in entrepreneurship could take a variety of engineering management courses. Others wishing to emphasize neural engineering could take courses in robotics and mechanical engineering, while those wanting to expand their horizons in tissue engineering could study biochemistry and material science.

Rose Squared

Getting Two Diplomas in 4 Years

Our new Rose Squared program allows you to accentuate your bachelor's degree in biomedical engineering with a master's degree in engineering management – all within four years! The program provides you a fast track to the integration of management skills and critical technical knowledge with foundational skills in biomedical engineering, increasing the breadth of professional employment opportunities upon graduation.



For more information on biomedical engineering at Rose-Hulman, scan this code with your smartphone

Get in Touch!

Department of Biology and Biomedical Engineering

812-877-8441

www.rose-hulman.edu/BBE

BE Students at Rose



UNDERGRADUATE RESEARCH

Many of our undergraduate students will utilize the opportunity to do research. Students can partner with a faculty member to complete an Independent Project/Research Opportunities Program (IPROP) or pursue a 10-week summer Interdisciplinary Research Collaborative (IRC) experience.

CAREERS

Our biomedical engineering alumni are in high demand. Companies hiring our graduates include:

- Baxter Healthcare
- Biopharma Solutions
- Boston Scientific
- Cook Group
- Eli Lilly and Company
- Epic Systems
- Hill-Rom
- Medtronic
- Sites Medical
- Zimmer Biomet

GRADUATE STUDIES

Many RHIT graduates choose to further their formal educations by seeking graduate degrees. Graduate schools selected by our graduates include:

- Georgia Tech
- Indiana University
- Johns Hopkins
- The Ohio State University
- Penn State University
- Rutgers University
- University of Florida
- West Virginia University

MEDICAL SCHOOL

Our graduates have also been accepted into medical schools such as Indiana University, University of Kentucky, and Duke University.



ABOUT ROSE-HULMAN

Rose-Hulman is one of the nation's top undergraduate engineering, science, and mathematics colleges. Our 1,300-acre scenic campus is home to more than 2,200 students with a passion for STEM and learning. We are consistently rated among the best colleges and universities in the country for return on investment, internships, and career placement.

812-877-1511
rose-hulman.edu

Follow us   @rosehulman