

Master of Science Biomedical Engineering



GRADUATE STUDIES

APPLYING ENGINEERING PRACTICES TO MEDICAL AND BIOLOGICAL PROBLEMS

Biomedical engineers apply engineering principles to solve medical and biological problems. The field combines the mathematical skills, physical science knowledge, and analytical ability of the engineer with the life scientist's knowledge and understanding of biology.

The biomedical engineering program at Rose-Hulman Institute of Technology is an interdisciplinary graduate program. Students work with faculty members from biology and biomedical engineering, as well as the mechanical engineering, electrical and computer engineering, chemistry, physics, and optical engineering departments.

The program is intended primarily for degree candidates with a bachelor of science degree in any engineering discipline. Applications from

students with different undergraduate majors are considered for admission on a case-by-case basis with the understanding that substantial additional undergraduate coursework may be required.

Program Requirements

- 36 credit hours of course work
- 12 credit hours of thesis work

(Students are required to take BE 511 and three other 500-level courses with a BE prefix listed on the graduate studies web page. Students are required to submit their Plan of Study for approval by their thesis advisor and their advisory committee.)





Satisfied Alumni

"After my MSBE I attended the Indiana University School of Medicine and am currently finishing my fellowship in orthopedic spine surgery. My master's degree created a seamless transition into medicine from my BSME. Even with all my medical education and training, I still find myself using my engineering degrees daily."

| Dr. Brian Blessinger, 2001, Orthocorolina
Charlotte, NC

"Being hired by the U.S. Air Force, the most immediate impact of my graduate degree was a much higher starting salary. However, I discovered that the independent nature of my thesis research prepared me well for a job that is very self-driven and relies on strong investigative technique."

| Aaron Baldauff, 2006, U.S. Air Force
South Charleston, OH

"The MSBE program at Rose-Hulman allowed me to focus my studies and research for direct application to industry. I've been in the biomed industry for eight

years and the graduate program at Rose-Hulman has served me well every step of the way."

| Kurt Dierking, 2003, design engineer, MedVenture
Technology, Jeffersonville, IN

"My graduate degree in biomedical engineering (after BS in mechanical engineering) helped propel me into the medical device industry upon graduation. My experience during my master's thesis research was invaluable, and also very attractive to companies (including Boston Scientific and Medtronic, where I have since worked). My time at Rose-Hulman for my master's degree included a graduate research assistantship with Los Alamos National Lab and hands-on research with the San Diego School of Medicine cadaver lab. My MS degree also prepared me fantastically for further academic study as I was chosen as a National Science Foundation fellow honorable mention and I'm currently a PhD candidate at the University of Minnesota."

| Andy Crisman, 2003, PhD candidate, University of
Minnesota, Minneapolis, MN



At a Glance

Rose-Hulman's graduate programs have a strong focus on applied research involving excellent faculty, facilities, and flexibility in a student's plan of study to meet individual goals. The graduate studies programs at Rose-Hulman offer a supportive atmosphere focused on the growth and development of each student.

Faculty

- Jameel Ahmed, PhD
- Richard Anthony, PhD
- Christine Buckley, PhD
- Alan Chiu, PhD
- Peter Coppinger, PhD
- Kay C Dee, PhD
- Emily Dosmar, PhD
- Ella Ingram, PhD
- Glen Livesay, PhD
- Jennifer O'Connor, PhD
- Renee Rogge, PhD
- William Weiner, PhD



ROSE-HULMAN
INSTITUTE OF TECHNOLOGY

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