The Mines mechanical engineering graduate program prepares students to develop novel computational and experimental solutions to a wide array of multidisciplinary technical engineering challenges. This program puts students at the forefront of technology development with research opportunities that include biomechanics; robotics and automation; solid mechanics and materials; and thermal-fluid systems. Students learn in a multidisciplinary environment that expands their skills and knowledge of opportunities in R&D and technical leadership as they prepare to find solutions to the world’s biggest challenges.

**DEGREE OPTIONS**

- **Doctor of Philosophy:** 72 credit hours, comprised of at least 36 credit hours of coursework and 30 credit hours of thesis research. Students must pass the qualifying exam and successfully defend a thesis.

- **Master of Science (thesis based):** 30 credit hours, comprised of 21 credit hours of coursework and 9 credit hours of thesis credit. Students must also write and orally defend a thesis.

- **Master of Science (non-thesis):** 30 credit hours, with the option of a project track (24 credit hours of coursework, plus 6 credit hours of project credit) or a coursework track (30 hours of coursework).
RESEARCH AREAS

Research within the department spans four broad divisions of activity that stem from core fields of mechanical engineering. Research is stimulated by the department’s strong connections with other Mines departments, domestic and international institutions, industry partners and federal labs.

**Biomechanics** focuses on the application of engineering principles to the musculoskeletal system and other connective tissues.

**Solid mechanics, materials and manufacturing** develops novel computational and experimental solutions for problems in the mechanical behavior of advanced materials.

**Robotics and automation** merges research from multiple areas of science and engineering.

**Thermal-fluid systems** incorporates a wide array of multidisciplinary applications, such as advanced energy conversion and storage, multiphase fluid flows, materials processing, combustion, alternative fuels and renewable energy.

APPLICATION INFORMATION

Minimum requirements for admission to the MS and PhD programs are as follows:

- A bachelor’s degree in computer science, a physical science or mathematics with a grade-point average of 3.0 or better on a 4.0 scale.
- Graduate Record Examination (GRE) with quantitative reasoning section score of 160 or higher. GRE is not required for applicants from a Mines engineering program.
- For international applicants or applicants whose native language is not English, a TOEFL of 79 or higher is required.

DOMESTIC APPLICATION DEADLINE: JULY 1

WITH ADDITIONAL QUESTIONS, CONTACT:

Office of Graduate Admissions
303-273-3247 | grad-app@mines.edu

APPLY NOW AT MINES.EDU/GRADPROGRAMS/ME