The Mines materials science graduate program prepares students to tackle the world’s problems related to matter and its applications to various areas of science and engineering. Through consideration of the four key foundational aspects of materials science—materials properties, materials structures, materials synthesis and processing and materials performance—graduates are well-equipped to investigate the relationship between the structure of materials at atomic or molecular scales and their macroscopic properties. Graduates of this unique, multidisciplinary program are highly sought after by industry, national laboratories and academia.

**PROGRAM STRUCTURE**

- **Doctor of Philosophy**: 72 credit hours, comprised of 24 credit hours of coursework and 48 credit hours of research. Doctoral students must pass the qualifying exam, complete and successfully defend a satisfactory thesis.

- **Master of Science (thesis based)**: 30 credit hours, including 18 credit hours of coursework and 12 credit hours of research.

- **Master of Science (non-thesis)**: 30 credit hours, comprised of 24 credit hours of courses and 6 credit hours of case study.
RESEARCH AREAS

Students and faculty engage in the design, study and manipulation of materials properties using advanced characterization and modeling techniques, complemented by extensive materials processing and testing capabilities. The materials-focused research centers at Mines spearhead campus-wide efforts on a variety of topics:

- Physical and extractive metallurgy
- Advanced ceramics
- Polymers and biomaterials
- Energy materials
- Materials modeling
- Advanced manufacturing

CORE COURSES

- Materials Thermodynamics
- Advanced Materials Kinetics and Transport
- Bonding, Structure and Crystallography

PROGRAM ADMISSION REQUIREMENTS

- Bachelor’s degree in engineering, computer science, physical sciences or mathematics with a grade-point average (GPA) of 3.0 or better on a 4.0 scale.
- Graduate Record Examination (GRE) is required.

DOMESTIC APPLICATION DEADLINE: OCTOBER 1

WITH ADDITIONAL QUESTIONS, CONTACT:
Office of Graduate Admissions
303-273-3247 | grad-app@mines.edu

APPLY NOW AT MINES.EDU/GRADPROGRAMS/MATERIALS