The Mines metallurgical and materials engineering graduate program allows students to tailor a path of study based on their interests, while maintaining the main theme of materials engineering and processing. There are three areas of specialization within the department: physical and mechanical metallurgy, physiochemical processing of materials and ceramic engineering. The department is home to six research centers and maintains close relationships with partners such as CoorsTek and the National Renewable Energy Laboratory.

**DEGREE OPTIONS**

- **Doctor of Philosophy:** 72 credit hours, comprised of at least 36 credit hours of coursework, a seminar and at least 24 credit hours of research. Students must also complete written and oral qualifying exams, present a research proposal and defend their thesis before the thesis committee.

- **Master of Science (thesis based):** 30 credit hours, comprised of at least 18 credit hours of coursework, a seminar and 6 credit hours of research credit. Students must also submit and successfully defend a thesis.

- **Master of Engineering (non-thesis):** 30 credit hours, comprised of 24 credit hours of coursework and either 3 credit hours of research-based independent study or a designated design course (3 credit hours) and seminar (1 credit hour).
FIELDS OF RESEARCH

• Ceramic research
• Coatings research
• Extractive and mineral processing research
• Nonferrous research
• Polymers and biomaterials
• Steel research
• Welding and joining research
• Nuclear materials research
• Experimental methods

PROGRAM ADMISSION REQUIREMENTS

• A bachelor’s degree, preferably in a science or engineering discipline.
• Graduate Record Examination (GRE) with quantitative section score of 1XX or higher (or 650 on the old scale). Applicants who have graduated from Mines within the past five years are not required to submit GRE scores.
• For international applicants or applicants whose native language is not English, a TOEFL score of 79 or higher (or 550 for the paper-based test, 213 for the computer-based test) is required. In lieu of a TOEFL score, an IELTS score of 6.5 or higher will be accepted.
• Applicants must also submit three letters of recommendation and an official undergraduate transcript.

DOMESTIC APPLICATION DEADLINE: JULY 1

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

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