The Mines metallurgical and materials engineering graduate program supports innovative and comprehensive graduate research and education programs. There are three areas of specialization within the department: physical and mechanical metallurgy, physiochemical processing of materials and ceramic engineering. The department maintains close collaboration with numerous industrial partners, national laboratories and government agencies.

**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 (including defending an engineering report) or a designated design course (3 credit hours) and seminar (1 credit hour).
FIELDS OF RESEARCH

- Physical metallurgy
- Ceramics
- Physicochemical processing of materials
- Welding and joining research
- Nuclear materials research

PROGRAM ADMISSION REQUIREMENTS

- A bachelor's degree, preferably in a science or engineering discipline.
- Graduate Record Examination (GRE) with quantitative section score in the 60th percentile.
- 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.

"The MME graduate program provides students with a wide range of valuable technical and professional skills that will allow them to be successful in whatever avenue of materials engineering they pursue. The distinguished, yet approachable, faculty is really what sets this program apart, as their doors are always open to discuss course content, technical concepts, research, and professional development."

GINNY JUDGE, PHD ’20
Bhakta and Sushama Rath Research Award Winner

ACCEPTING APPLICATIONS

TO LEARN MORE, VISIT:
gradprograms.mines.edu/mme or contact materials-info@mines.edu