The Mines chemical engineering graduate program provides a rigorous educational experience where faculty and top-notch students work together on meaningful research with far-reaching societal applications. Research areas include bioengineering, catalysis, colloids and complex fluids, computational science, fuel cells, gas hydrates, membranes, polymers and solar and electronic materials. This program is extremely diverse and features research in renewable energy, materials science, transport processes, theoretical and applied thermodynamics, computational methods and atomistic simulation.

**DEGREE OPTIONS**

- **Doctor of Philosophy:** 72 credit hours, comprised of at least 30 credit hours of coursework and 42 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, comprised of at least 18 credit hours of coursework and 12 credit hours of research.

- **Master of Science (non-thesis):** 30 credit hours of coursework.
RESEARCH AREAS
The Department of Chemical and Biological Engineering has a diverse and dynamic research portfolio, managing approximately $8 million annually in research awards. Current strengths include bioengineering, hydrates, renewable energy, simulation and modeling, soft materials, materials for energy applications and electronic materials.

CORE COURSE EXAMPLES
- Applied Mathematics in Chemical Engineering
- Advanced Chemical Engineering Thermodynamics
- Transport Phenomena
- Reaction Kinetics and Catalysis
- Introduction to Chemical Engineering Research and Teaching

PROGRAM ADMISSION REQUIREMENTS
- The program considers a candidate’s grade-point average (GPA), performance in core chemical engineering and math courses, Graduate Record Examination (GRE) scores and letters of recommendation as evidence of potential to succeed in rigorous graduate courses.
- Candidates should have a background in chemistry, mathematics and physics.
- Recent admitted students have had an average GPA of 3.78 on a 4.0 scale.
- Average GRE scores are in the 84th percentile for the quantitative section and the 69th percentile for the verbal section.

DOMESTIC APPLICATION DEADLINE: DECEMBER 15
WITH ADDITIONAL QUESTIONS, CONTACT:
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