The Mines applied physics degree program prepares students with a solid background in the fundamentals of classical and modern physics at an advanced level. Departmental research is supported by external grants in excess of $6 million annually, with strong efforts in condensed matter physics, applied optics, quantum physics, renewable energy and subatomic physics. Numerous projects involve cooperative relationships with local companies, national and international collaborations with other universities, government labs and active partnerships with Mines faculty in other departments. The department is a member of the interdisciplinary materials science program and the interdisciplinary nuclear science and engineering program.

PROGRAM STRUCTURE

• **Doctor of Philosophy**: 72 credit hours, comprised of 32 credit hours of coursework and 40 credit hours of research. Doctoral students must pass the comprehensive exam, complete and successfully defend a satisfactory thesis.

• **Master of Science (thesis based)**: 36 credit hours, comprised of 20 credit hours of coursework and 16 credit hours of research credit, with a satisfactory thesis.
RESEARCH AREAS
The Department of Physics is dedicated to advancing the world’s knowledge in the following areas:

- Condensed matter physics
- Subatomic physics
- Applied optics
- Renewable energy physics
- Quantum physics

CORE COURSES

- Mathematical Physics
- Quantum Mechanics I & II
- Classical Mechanics I
- Electromagnetic Theory I
- Statistical Mechanics

PROGRAM ADMISSION REQUIREMENTS

- Graduate Record Examination (GRE) is required. 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 will be accepted.

APPLICATION DEADLINE: DECEMBER 15
TO LEARN MORE, VISIT:
gradprograms.mines.edu/physics or contact physicsgrad@mines.edu