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 and 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 (Physics):** 72 credit hours, comprised of 32 credit hours of coursework and 40 credit hours of research. Doctoral students must complete and successfully defend an original research thesis.

- **Master of Science (Applied Physics, thesis based):** 36 credit hours, comprised of 20 credit hours of coursework and 16 credit hours of research credit, with an original research thesis.
RESEARCH AREAS

The Department of Physics is dedicated to advancing the world’s knowledge in the following areas:

- Condensed matter physics
- Subatomic physics
- Optical physics
- Renewable energy physics
- Quantum physics

CORE COURSES

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

PROGRAM ADMISSION REQUIREMENTS

- For Fall 2021 applications, due to the COVID-19 pandemic we are temporarily waiving the requirement for GRE and Subject 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