The Mines hydrologic science and engineering graduate program prepares students to develop the fundamental knowledge and creative problem-solving skills necessary for tackling the planet’s greatest water challenges. This interdisciplinary program gives students a solid background in quantitative hydrology and explores specialties within related fields through water-focused coursework that is offered across nearly half of the departments on campus. Meaningful research connections and collaborations with industry and government entities prepare graduates to identify the most pressing current and unknown water challenges, from a local to a global scale.

DEGREE OPTIONS

- **Doctor of Philosophy**: 72 credit hours, comprised of at least 36 credit hours of coursework, at least 12 credit hours of coursework in a minor program of study and at least 24 credit hours of thesis research. Students must pass the qualifying exam and successfully defend a thesis.

- **Master of Science (thesis based)**: 30 credit hours, comprised of 24 credit hours of coursework and 6 credit hours of thesis credit. Students must also write and orally defend a thesis.

- **Master of Science (non-thesis)**: 30 credit hours, comprised of 27 credit hours of coursework and 3 credit hours of independent study.
RESEARCH AREAS

Programs of study are offered in fundamental hydrologic science and applied hydrology with engineering applications. This program encompasses:

- Grounderwater hydrogeology
- Surface water hydrology
- Vadose zone hydrology
- Climate change impacts
- Watershed hydrology
- Contaminant transport and fate
- Contaminant remediation
- Hydrogeophysics
- Water management
- Land-atmosphere interactions
- Urban hydrology

CORE COURSES

- Ground Water Engineering
- Surface Water Hydrology
- Contaminant Fate and Transport
- Principles of Environmental Chemistry
- Fluid Mechanics for Hydrology

PROGRAM ADMISSION REQUIREMENTS

- Bachelor’s degree in science or engineering discipline with a grade-point average (GPA) of 3.0 or better on a 4.0 scale.
- Completed college coursework in calculus, differential equations, physics, chemistry and statistics. Some prerequisites may be completed in the first semesters of the student’s graduate program.
- Graduate Record Examination (GRE) is required for admission.

ACCEPTING APPLICATIONS

TO LEARN MORE, VISIT:
gradprograms.mines.edu/hse or contact hydrology@mines.edu