The Mines space resources graduate program is the first in the world focused on educating scientists, engineers, economists, entrepreneurs and policy makers in the developing field of space resources.

Since the 1990s, Mines has been a leading institution for the study of space resources and their utilization. Students in this program will take advantage of the university’s world-renowned expertise in terrestrial resources and energy systems and apply that knowledge beyond our planet.

Students will learn current scientific, technical, economic and policy aspects of this field from a multidisciplinary group of experts in academia, space agencies and the private sector.

DEGREE OPTIONS

- **Post-Baccalaureate Certificate** – online: 12 credit hours from core courses (9 hours) and an elective course (3 hours)

- **Master of Science (non-thesis)** - online: 30 credit hours with all core courses (15 credit hours) and elective courses (15 credit hours) chosen from the five specialization tracks.

- **Doctor of Philosophy (PhD)** - residential or online: 36 credit hours of coursework, 36 credit hours of research and a doctoral dissertation
PROGRAM STRUCTURE

All core courses and technical electives needed for online degrees are conducted asynchronously with access to videos, documents, discussion boards and assignments. In addition, weekly synchronous video-conferencing sessions are scheduled at different times of the day for easy access and interaction among faculty, guest lecturers and students from around the world. Residential PhD students may also enroll in technical electives offered on campus.

CORE COURSES

- Space Resources Fundamentals
- Space Systems Engineering
- Graduate Seminar
- Space Resources Design Project I
- Space Resources Design Project II
- Engineering/Economic Analysis

SPECIALIZATION TRACKS

The program offers several technical elective courses in five specialization tracks covering topics in exploration, mining, extraction, processing, manufacturing and stewardship of space, lunar, asteroidal and planetary resources.

- Remote sensing and resource assessment
- Extraction, processing and in situ resource utilization (ISRU)
- Power and energy
- Robotics, autonomy and communications
- Economics and policy

ACCEPTING APPLICATIONS

TO LEARN MORE, VISIT:
gradprograms.mines.edu/space or contact spaceresources@mines.edu