

Colorado School of Mines Catalog

The role and mission of Mines is defined by the State legislature and as such is codified in Colorado State Statute to be:

The Colorado School of Mines shall be a specialized baccalaureate and graduate research institution with high admission standards. The Colorado School of Mines shall have a unique mission in energy, mineral, and materials science and engineering and associated engineering and science fields. The school shall be the primary institution of higher education offering energy, mineral and materials science and mineral engineering degrees at both the graduate and undergraduate levels. (Colorado revised Statutes: Section 23-41-105).

In addition to the formal statement on the role and mission of Mines, the Board of Trustees elaborated upon Mines' statutory role:

Mines Mission

Our STEM-focused education and research produce the talent, knowledge and solutions to serve industry and benefit society – all to create a more prosperous future. It's the mission Mines was founded on 150+ years ago and where we continue to excel today. We're a community of innovative leaders and resilient problem-solvers who revel in challenges and work together in order to engineer solutions on Earth and beyond.

Vision

Mines will be the premier institution for engineering and science, based on the impact of its students, graduates and research programs.

Colorado School of Mines is a world-renowned institution that continually enhances its leadership in education and research to serve and advance industry, government agencies and communities around the world. By maximizing its top-ranked academic programs, close industry connections, cutting-edge research and a global alumni network, Mines is the go-to place for distinction and expertise in both established and emerging engineering and scientific fields.

Catalog Usage

The Undergraduate Catalog is the official resource for academic programs, course offerings, and graduation requirements at Colorado School of Mines. While every effort is made to ensure the accuracy of the information, updates may occur between publications. Students are expected to consult the most recent version of the catalog, available on the Mines website, as it reflects the most current and authoritative information. Ultimately, it is the student's responsibility to be aware of applicable policies, procedures, and academic requirements. Lack of knowledge of a regulation does not exempt a student from compliance. For addendums to the current catalog that were not available at the time of production, go to the Catalog Addendum section.

Colorado School of Mines - The Education

At Colorado School of Mines, we believe science, technology, engineering, and mathematics are powerful tools for shaping a better

world. Our educational mission is built on a foundation of commitment and partnership between students and faculty.

Here, learning is a collaborative process. Faculty serve not only as instructors and mentors in the classroom, but also as research partners and co-creators of knowledge beyond it. We value your curiosity and initiative as much as your preparation and performance.

A Mines education sits at the intersection of strong technical training, intentional professional development, and real-world application. Our degree programs prepare you with the knowledge, skills, and mindset to lead in industry, research, and society.

This catalog is your guide to the academic programs and opportunities that define the Mines experience. We invite you to explore it and to imagine the impact you'll make.

An institutional goal for all of these programs is articulated in the Profile of the Colorado School of Mines Graduate:

- All Mines graduates must have depth in an area of specialization, enhanced by hands-on experiential learning and breadth in allied fields. They must have the knowledge and skills to be able to recognize, define and solve problems by applying sound scientific and engineering principles. These attributes uniquely distinguish our graduates to better function in increasingly competitive and diverse technical professional environments.
- Graduates must have the skills to communicate information, concepts and ideas effectively orally, in writing, and graphically. They must be skilled in the retrieval, interpretation and development of technical information by various means, including the use of computer-aided techniques.
- Graduates should have the flexibility to adjust to the ever-changing professional environment and appreciate diverse approaches to understanding and solving society's problems. They should have the creativity, resourcefulness, receptivity and breadth of interests to think critically about a wide range of cross-disciplinary issues. They should be prepared to assume leadership roles and possess the skills and attitudes which promote teamwork and cooperation and to continue their own growth through lifelong learning.
- Graduates should be capable of working effectively in an international environment and be able to succeed in an increasingly interdependent world where borders between cultures and economies are becoming less distinct. They should appreciate the traditions and languages of other cultures, and value diversity in their own society.
- Graduates should exhibit ethical behavior and integrity. They should also demonstrate perseverance and have pride in accomplishment. They should assume a responsibility to enhance their professions through service and leadership and should be responsible citizens who serve society, particularly through stewardship of the environment.

Graduate Student Profile

Mines graduate students identify and address grand challenges of the twenty-first century using innovative applications of sound scientific

and engineering principles. They act as contributors and leaders of multidisciplinary teams to deliver impactful results for the betterment of society.

Mines graduate students are skilled in the acquisition, interpretation, and analysis of data as well as communication of information to diverse audiences. They exemplify ethical behavior including academic and professional integrity, respect for diversity of all types, and recognition of the value of living and working in an interdependent world.

History of Colorado School of Mines

In 1865, only six years after gold and silver were discovered in the Colorado Territory, the fledgling mining industry was in trouble. The nuggets had been picked out of streams and the rich veins had been worked, and new methods of exploration, mining, and recovery were needed.

Early pioneers like W.A.H. Loveland, E.L. Berthoud, Arthur Lakes, George West and Episcopal Bishop George M. Randall proposed a school of mines. In 1874, the Territorial Legislature appropriated \$5,000 and commissioned Loveland and a Board of Trustees to found the Territorial School of Mines in or near Golden. Governor Routt signed the bill on February 9, 1874, and when Colorado became a state in 1876, the Colorado School of Mines was constitutionally established. The first diploma was awarded in 1883.

Location

1500 Illinois St., Golden CO 80401

Accreditation

Mines is accredited through the doctoral degree by the Higher Learning Commission (HLC) of the North Central Association, 230 South LaSalle Street, suite 7-500, Chicago, Illinois 60604-1413 - telephone (312) 263-0456. The Engineering Accreditation Commissions of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 - telephone (410) 347-7700, accredits the following undergraduate engineering degree programs at Mines:

- Bachelor of Science in Chemical Engineering
- Bachelor of Science in Civil Engineering
- Bachelor of Science in Environmental Engineering
- Bachelor of Science in Design Engineering
- Bachelor of Science in Electrical Engineering
- Bachelor of Science in Geological Engineering
- Bachelor of Science in Geophysical Engineering
- Bachelor of Science in Mechanical Engineering
- Bachelor of Science in Metallurgical and Materials Engineering
- Bachelor of Science in Mining Engineering
- Bachelor of Science in Petroleum Engineering
- Bachelor of Science in Engineering Physics

The American Chemical Society accredits the following degrees:

- Bachelor of Science in Chemistry.

Board of Trustees

General management of the school is vested by State statute in a Board of Trustees, consisting of seven members appointed by the governor. A nonvoting student member is elected annually by the student body

and a nonvoting faculty member is elected to serve a two-year term by the academic faculty. Financial support comes from student tuition and fees and from the state through annual appropriations. These funds are augmented by government and privately sponsored research, private gift support from alumni, corporations, foundations and other friends. Please visit <https://www.mines.edu/trustees/> for more information.

Colorado School of Mines Non-Discrimination Statement

In compliance with federal law, including the provisions of Titles VI and VII of the Civil Rights Act of 1964, Title IX of the Education Amendment of 1972, Sections 503 and 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act (ADA) of 1990, the ADA Amendments Act of 2008, Executive Order 11246, the Uniformed Services Employment and Reemployment Rights Act, as amended, the Genetic Information Nondiscrimination Act of 2008, and Board of Trustees Policy 10.6, the Colorado School of Mines does not discriminate against individuals on the basis of age, sex, sexual orientation, gender identity, gender expression, race, religion, ethnicity, national origin, disability, military service, or genetic information in its administration of educational policies, programs, or activities; admissions policies; scholarship and loan programs; athletic or other school-administered programs; or employment.

Inquiries, concerns, or complaints should be directed by subject content as follows:

The EO, ADA Coordinator, and Section 504 Coordinator for employment:

Craig Hess, Director of Employee Relations
Human Resources Office
1500 Illinois Street
Golden, Colorado 80401
303-273-3390

The ADA Coordinator and the Section 504 Coordinator for students and academic educational programs:
Marla Draper, Director of Disability Support Services
1225 17th Street
Golden, Colorado 80401
303-273-3297
disabilitysupport@mines.edu

Title IX Complaints and Student Discrimination Complaints:
Carole Goddard, Title IX Coordinator
Golden, Colorado 80401
303-273-3206
titleix@mines.edu (kschmalz@mines.edu)

The ADA Facilities Access Coordinator is:
Jason Slowinski, Director of Facilities Management
1318 Maple Street
Golden, Colorado 80401
303.273.3330

Complaints of Alleged Violations related to student privacy (FERPA):

<https://studentprivacy.ed.gov/file-a-complaint>

Student Privacy Policy Office
U.S. Department of Education
400 Maryland Avenue, SW

Washington, DC 20202-8520