# Welcome

#### The Academic Environment

We strive to fulfill this educational mission through our undergraduate curriculum and in an environment of commitment and partnership among students and faculty. The commitment is directed at learning, academic success and professional growth, it is achieved through persistent intellectual study and discourse, and it is enabled by professional courtesy, responsibility and conduct. The partnership invokes expectations for both students and faculty. Students should expect access to high quality faculty and to appropriate academic guidance and counseling; they should expect access to a high quality curriculum and instructional programs; they should expect to graduate within four years if they follow the prescribed programs successfully; and they should expect to be respected as individuals in all facets of campus activity and should expect responsive and tactful interaction in their learning endeavors. Faculty should expect participation and dedication from students, including attendance, attentiveness, punctuality and demonstrable contribution of effort in the learning process; and they should expect respectful interaction in a spirit of free inquiry and orderly discipline. We believe that these commitments and expectations establish the academic culture upon which all learning is founded.

Mines offers the Bachelor of Science degree in Applied Mathematics and Statistics, Biochemistry, Business Engineering & Management Science, Ceramic Engineering, Chemical Engineering, Chemistry, Civil Engineering, Computer Science, Construction Engineering, Design Engineering, Economics, Electrical Engineering, Engineering Physics, Environmental Engineering, Geological Engineering, Geophysical Engineering, Mechanical Engineering, Metallurgical and Materials Engineering, Mining Engineering, Petroleum Engineering and Quantitative Biosciences & Engineering.

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

## **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.

As Mines grew, its mission expanded from the rather narrow initial focus on nonfuel minerals to programs in petroleum production and refining as well. Recently it has added programs in materials science and engineering, energy and environmental engineering, and a broad range of other engineering and applied science disciplines. Mines sees its mission as education and research in engineering and applied science with a special focus on the earth science disciplines in the context of responsible stewardship of the earth and its resources.

Mines long has had an international reputation. Students have come from nearly every nation, and alumni can be found in every corner of the globe.

Colorado School of Mines is a public research university devoted to engineering and applied science. It has the highest admission standards of any public university in Colorado and among the highest of any public university in the United States.

# **Unique Programs**

Colorado School of Mines is an institution of engineering and applied science with a special focus in Earth, Energy, Environment and Materials. As such, it has unique programs in many fields. This is the only institution in the world, for example, that offers doctoral programs in all five of the major earth science disciplines: Geology and Geological Engineering, Geophysics, Geochemistry, Mining Engineering and Petroleum Engineering. It has one of the few Metallurgical and Materials Engineering programs in the country that still focuses on the complete materials cycle from mineral processing to finished advanced materials.

In addition to these traditional programs which define the institutional focus, the school is pioneering programs in interdisciplinary areas. One of the most successful of these is in the College of Engineering and Computational Sciences, which currently claims more than one-third of the undergraduate majors. This program combines civil, electrical, environmental and mechanical engineering in a nontraditional curriculum that is accredited by the Engineering Accreditation Commission of the

Accreditation Board for Engineering and Technology, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 – telephone (410) 347-7700.

While many of the programs at Mines are firmly grounded in tradition, they are all experiencing continual evolution and innovation. Recent successes in integrating aspects of the curriculum have spurred similar activity in other areas such as the geosciences. There, through the medium of computer visualization, geophysicists and geologists are in the process of creating a new emerging discipline. A similar development is occurring in geoengineering through the integration of aspects of civil engineering, geology and mining. Mines has played a leadership role in this kind of innovation over the last decade. Many degree programs offer Mines undergraduate students the opportunity to begin work on a graduate certificate, professional master's degree, or master's degree while completing the requirements for their bachelor's degree. These combined bachelor's-master's programs have been created by Mines faculty in those situations where they have deemed it academically advantageous to treat BS and MS degree programs as a continuous and integrated process. These are accelerated programs that can be valuable in fields of engineering and applied science where advanced education in technology and/or management provides the opportunity to be on a fast track for advancement to leadership positions. These programs also can be valuable for students who want to get a head start on graduate education.

#### Location

Golden, Colorado has been the home for Mines since its inception. Located 20 minutes west of Denver, this community of 20,000 is located in the foothills of the Rockies. Skiing is an hour away to the west. Golden is a unique community that serves as home to Mines, the Coors Brewing Company, the National Renewable Energy Laboratory, a major U.S. Geological Survey facility that also contains the National Earthquake Center, and the seat of Jefferson County. Golden once served as the territorial capital of Colorado.

#### **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 Commission of the Accreditation Board for Engineering and Technology (ABET), 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 – telephone (410) 347-7700, accredits undergraduate degree programs in Chemical Engineering, Civil Engineering, Electrical Engineering, Engineering, Engineering, Physics, Environmental Engineering, Geological Engineering, Geophysical Engineering, Mechanical Engineering, Metallurgical and Materials Engineering, Mining Engineering and Petroleum Engineering. The American Chemical Society has approved the degree program in the Department of Chemistry and Geochemistry.

#### Administration

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.

## 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: Gary Bowersock, Director of Facilities Management 1318 Maple Street Golden, Colorado 80401 303.273.3330