

University Information

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Black Hills State University, Spearfish
Dakota State University, Madison
Northern State University, Aberdeen
South Dakota School of Mines and
Technology, Rapid City
South Dakota State University, Brookings
University of South Dakota, Vermillion

Degrees

The following degrees are offered at the South Dakota School of Mines and Technology in the designated fields of study.

Associate of Arts

General Studies

Bachelor of Science

Chemical Engineering
Chemistry
Civil Engineering
Computer Engineering
Computer Science
Electrical Engineering

Environmental Engineering
Geological Engineering
Geology
Industrial Engineering and
Engineering Management
Interdisciplinary Sciences
Areas of Specialization:
1. Atmospheric Sciences
2. Business Applications in Science and
Technology
3. Pre-Professional Health Sciences
4. Science, Technology, and Society
Mathematics, Applied and Computational
Metallurgical Engineering
Mechanical Engineering
Mining Engineering
Physics

Master of Science

Atmospheric Sciences
Biomedical Engineering
Chemical Engineering
Civil Engineering
Computer Science
Electrical Engineering
Geology and Geological Engineering
Materials Engineering and Science
Mechanical Engineering
Paleontology
Technology Management

Doctor of Philosophy

Atmospheric and Environmental Sciences
Biomedical Engineering
Chemical and Biological Engineering
Geology and Geological Engineering
Materials Engineering and Science
Nanoscience and Nanoengineering

Further information concerning the engineering and science curricula leading to the engineering and science degrees may be found in the individual college sections of this catalog.

Accreditation

The South Dakota School of Mines and Technology is accredited by the Higher Learning Commission of the North Central Association of

Colleges and Secondary Schools, the recognized accrediting agency for the north central states. For more information call (800) 621-7440 or visit: <www.ncahigherlearningcommission.org>.

In addition, the curriculum in chemistry is approved by the American Chemical Society. All engineering programs with the exception of mining engineering and management, which is a new program, are accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology, a specialized accreditation body recognized by the Council on Post-Secondary Accreditation and the U.S. Department of Education. The computer science program is accredited by the Computing Accreditation Commission of the Accreditation Board for Engineering and Technology.

Equal Opportunity Policy

South Dakota School of Mines and Technology is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, color, creed, national origin, ancestry, religion, gender, age, sexual orientation, marital status, pregnancy, military/Veteran's status, or disability. In adhering to this policy, South Dakota School of Mines and Technology abides by all federal and state statutes and regulations for the protection of employees against discrimination. Inquiries regarding compliance may be directed to the Director of Human Resources, South Dakota School of Mines and Technology, 501 East Saint Joseph St., Rapid City, SD 57701, (605) 394-1203.

Human Resources

The Office of Human Resources provides services to School of Mines' employees and students, as well as to the general public. These services include compensation, recruitment, benefits, performance, employee relations, and interpretation and enforcement of policies and procedures.

The mission of the Office of Human Resources at the South Dakota School of Mines and Technology is to partner with employees,

students, and administration to promote a work and educational environment that is characterized by fair treatment, open communications, personal accountability, trust, and mutual respect.

The director of human resources serves as the campus Title IX/EEO (Equal Employment Office) representative for human rights issues and is Co-Coordinator of ADA (Americans with Disabilities Act).

Campus Buildings

The Arch is located in the center of campus in the Quad area. The stones used in the construction of the arch were from the third building (Liberal Arts Building) constructed on campus. The first phase of that building was completed in 1901. Due to structural problems, the building was razed in the summer of 1994, and the stones used in the original "Arch" were carefully dismantled by hand to facilitate its reassembly during the 1995-96 year.

The Chemistry/Chemical Engineering Building was completed and occupied in early 1957. It is fully equipped with classrooms and laboratories and houses the Department of Chemical and Biological Engineering and the Department of Chemistry.

The Civil/Mechanical Engineering Building, completed and occupied in 1951, houses three major engineering departments. They are the Departments of Civil and Environmental Engineering, Industrial Engineering and Engineering Management, and Mechanical Engineering. The building also houses the Environmental Engineering program. During 2005, a 10,000 square foot addition was added for computational mechanics. This building is equipped with classrooms, faculty and graduate student offices, PC computing facilities, work-station computing facilities, and a wide range of engineering laboratories. Laboratory facilities include materials testing, heat transfer, composite materials, controls, robotics and integrated manufacturing, hydraulics, geotechnical, environmental and work methods, and measurements. This building was completely renovated during the 1999-2000 year. The Center for Advanced Manufacturing and Processing, the

Additive Manufacturing Laboratory, the Advanced Materials Processing and Joining Laboratory, and the Human Engineering Laboratory are housed in this building.

The Electrical Engineering/Physics Building, completed in 1973, provides offices and laboratory facilities for the electrical and computer engineering and the physics departments. This building houses the computer services staff, and provides technology equipped classrooms.

The McLaury Building, built in 1920, provides classrooms, laboratories, and offices for the mathematics and computer science department, the biology program, and the Office of Educational Programs and Professional Conferences.

The Mineral Industries Building was occupied in 1962. It is a three-story building of 52,000 square feet. The Departments of Geology and Geological Engineering, Materials and Metallurgical Engineering, Mining Engineering, Atmospheric Sciences, and the Institute of Atmospheric Sciences are located in this building. The Office of Research Affairs, Office of Graduate Education, Office of Sponsored Programs, Engineering and Mining Experiment Station, and South Dakota Space Grant Consortium are also housed in this building. This structure provides classroom and laboratory facilities for undergraduate and graduate study in several fields related to materials and earth systems sciences and engineering.

The Classroom Building, completed and occupied in the fall of 1989, houses the Departments of Humanities, Social Sciences, and Military Science, and distance learning classrooms including the Digital Dakota Network studios and the Governor's Electronic Classroom. This three-story building of 44,000 square feet provides more than 20 air-conditioned classrooms that are used to support all programs. This structure features divisible classrooms, art gallery, and faculty lounge.

The Darold D. "Dud" King Center for physical education building was completed and occupied in 1976. Seating for 2,100 spectators at athletic events is available. Two handball/racquetball courts, one squash court,

offices, training rooms, a swimming pool, and a basketball court are provided in this 60,000-square-foot structure. Also included are music classroom and practice areas with adjoining music offices, music library, and electronic music laboratory. During the 2003-04 year, the building was renovated to provide a wellness center and new locker rooms.

The Christensen Hall of Fame addition to the King Center honors past athletes, coaches, teams, athletic traditions, and contributors by permanently dedicating a place to remember the past and to look to the future with pride for what the School of Mines stands for on the playing field and in the classroom. The Christensen Hall of Fame also honors Jim and Nancy Christensen, longtime supporters of the School of Mines. The Christensens' ties to School of Mines, its athletic programs, and the Hardrock Club are deep. While Jim was a School of Mines student in the 1950s, he was a member of the Hardrocker football and track teams. He graduated from the School of Mines with a degree in General Engineering in 1957. A donation from the Christensens made the Hall of Fame possible.

The Physical Plant Building, completed in 1974, provides an excellent base for the operation of the university in the areas of electrical, mechanical, and other maintenance. This building also houses the campus mailroom.

The Old Gymnasium is used for intramural activities.

Dunham Field at O'Harra Stadium is one of the most unique athletic fields in the region. The architects took advantage of natural topographic features on three sides of the field to construct parking terraces that can accommodate approximately 300 automobiles from which spectators can view the field. An artificial turf playing field was installed in 2006 and is encircled by an all-weather running track, renovated in 2002. The stadium is currently undergoing renovations.

Cannolly Hall, completed in 1948, and remodeled in 1964, provides living accommodations for male and female students.

Palmerton Hall, completed in 1969, accommodates both male and female students. It is a completely carpeted five-story building with

access to each floor provided by both elevator and stairs.

Howard Peterson Hall is a 300-bed residence hall that was occupied for the first time during the fall 2004 semester. It is located adjacent to the south end of the Surbeck Center. Room configurations include suites and standard double rooms. Study lounges, a kitchen, and an exercise room are included. Since the residence hall connects to the Surbeck Center's main floor, a common front desk operation serves both complexes. The residence hall is named after Dean of Students Emeritus Howard Peterson, a School of Mines alumnus who continues his service as a volunteer to the Foundation, the Alumni Association, and other aspects of campus life.

The March-Dake Plaza, located close to the former site of March-Dake Hall, honors two former School of Mines presidents who played important roles in making it the excellent university it is today. The plaza honors the legacy that current university leaders strive to follow as the School of Mines moves into the future.

In 2004, renovations to the **Devereaux Library** opened another floor for collections, new study areas for students, news areas for special collections, and created a friendlier atmosphere for study and research. The library, completed in 1970, includes 56,000 square feet of modern space that is carpeted and air conditioned. The library houses the Tech Learning Center and serves as the Patent and Trademark Depository for the state.

Surbeck Center, the student union for the School of Mines, provides more than just 71,000 square feet of space devoted to campus and community activities. It also provides information services, equipment check-out for students, and scheduling services for the campus. Surbeck Center's main office serves as a one-stop scheduling center that assists with the reservation and coordination of university resources for the various activities of the university — academic, student, departmental, community, and professional. Additionally, Surbeck Center staff provide assistance for all on-campus activities, events, academic, and summer conference scheduling.

Surbeck Center's main floor houses a large student lounge, the SDSM&T Alumni Association office, the bookstore, a banquet-ballroom, the Career Center, conference rooms, Counseling and Student ADA Services, the Vice President for Student Affairs and Dean of Students office, Health Services, mail boxes for all students living on campus, Student Accounts and Cashiering Services, the main office for Residence Life, and the Surbeck Center offices. The dining hall, snack bar, recreation area, Student Activities and Leadership Center, Ivanhoe International Center, the Multicultural Affairs office, Campus Ministries, and display areas can be found in the lower level, in addition to more meeting rooms and leisure space for students. Surbeck Center includes renovated spaces completed in 2004.

The O'Harra Memorial Building was completed in the summer of 1942 as a joint State and Federal Work Projects Administration Project. It houses the administration offices, the Office of Academic and Enrollment Services, the Office of Financial Aid, the Office of Admissions, the SDSM&T Foundation, and the Museum of Geology, and is named in honor of Dr. C.C. O'Harra, president and professor of geology at the university from 1911 to his death in 1935.

The Kids Kastle Little Miner's Clubhouse was established in 1995 to provide child-care services for students, faculty, staff, and area alumni.

History

The South Dakota School of Mines and Technology was originally established by the Dakota Territorial Legislature as the Dakota School of Mines in 1885 to provide instruction in mining engineering at a location where mining was the primary industry.

The School of Mines opened for instruction on February 17, 1887. Dr. Franklin R. Carpenter, a graduate of Ohio University, was appointed president and dean of the faculty. Degrees were initially offered in mining engineering, civil engineering, and general science. When North and South Dakota were granted statehood in 1889, the school was re-designated as the South Dakota School of Mines.

During the presidency of Dr. Robert Slagle (1896-1905), field geology was introduced, and a large collection of Badlands fossils and minerals was added to the geological museum. During that period, the third building was constructed on campus and the first School of Mines magazine was published. Faculty size and student enrollment reached a peak in 1905 that was not to be exceeded until 1920.

The university's reputation as a diversified science and engineering school was established following World War I with the rapid increase of engineering students and the termination of college preparatory courses. In 1943, the state legislature changed the name of the institution to the South Dakota School of Mines and Technology, in recognition of the school's expanded role in new areas of science and technology. Since that time, the university has expanded its curriculum to include 10 engineering and six science undergraduate degrees and graduate programs leading to the master of science degree in 11 engineering and/or science disciplines. The School of Mines offers programs leading to the doctor of philosophy degree in atmospheric and environmental sciences, biomedical engineering, chemical and biological engineering, geology and geological engineering, materials engineering and science, and nanoscience and nanoengineering.

As the bounds of technology continue to expand, the university continues to meet the challenge of preparing students for highly technical careers in engineering and science.

Location

Rapid City, South Dakota's second largest city, is located at the base of the Black Hills in the southwestern part of the state. Directly to the west is the beautiful Black Hills region, and to the east lie the awesome White River Badlands. Mount Rushmore and Crazy Horse Memorial are within a one-hour drive from the campus, and throughout the Black Hills are attractions that focus on the Native American and early Gold Rush history of the area.

The Black Hills area is a naturalist's dream. There are many caves to explore, mountains to

hike and ski, and streams to enjoy. In addition, there is a vast variety of rocks and minerals, wildlife, and plant life indigenous to the area.

The Badlands, formed by natural erosion, offer the viewer an eerie but beautiful landscape of multicolored peaks and deep ravines. The Badlands area, as well as the northwest and southwest portions of South Dakota, offer some of the world's most prolific sources of fossils. Discoveries of a Tyrannosaurus rex skeleton, a Triceratops skull, and a mammoth butcher site have added to this reputation. More than four million visitors enjoy the Black Hills/Badlands area each year.

Campus Safety

The South Dakota School of Mines and Technology is committed to protect its students, faculty, staff, visitors and property, and to maintain an environment suitable for the orderly conduct of its educational function. In order to respond to situations that would adversely affect the ability to fulfill these responsibilities, the university has developed an Emergency Management Plan. The fundamental purpose of the plan is to establish procedures and an organizational hierarchy for the rapid and effective response to all categories of campus emergencies ranging from individual departmental or building incidents to catastrophic events involving the entire campus and the surrounding community.

The Rapid City Police Department personnel respond to campus emergencies. Campus Safety personnel conduct functions which include securing buildings after hours and providing a campus escort service that may be utilized 24 hours a day by calling (605) 394-6100. A mass notification system is in place to provide timely communication to students, faculty, and staff. With the assistance of the Rapid City Police Department, the School of Mines provides safety and security education and awareness programs. The purpose of these programs is to make the campus community aware of safety issues and techniques. The programs also cover alcohol and drug abuse control and prevention through the

coordination of the Campuses Community Prevention Coalition.

Campus emergency procedures and statistics are outlined in the campus safety brochure in compliance with the Drug Free School and Communities Act of 1989 and the Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act. This information is distributed annually to all students and university personnel and is available on the School of Mines website, <<http://sdmines.sdsmt.edu/safety>> and from the Vice President for Student Affairs and Dean of Students Office.

SDSM&T Alumni Association

The South Dakota School of Mines and Technology Alumni Association promotes communication and interaction among alumni, students, faculty, and administrators of the School of Mines with the objective of strengthening the university's academic, research, and service roles. The association also provides an alumni network and support services for graduates throughout the world. Services provided by the Alumni Association include maintenance of the alumni database, a semiannual publication (the *Hardrock*) mailed to friends of the school and all alumni, a weekly electronic newsletter (the *Hardrock E-News*), a biennial Alumni Directory, coordination of alumni recognition programs, area meetings, class reunions and get-togethers, and an all-school reunion every five years. The next five-year reunion is scheduled for July 7-11, 2010.

The Alumni Association also provides student support funds and mentoring, and helps promote the School of Mines Alumni Recruiting Team (SMART). The Alumni Association is a 501 (c)(3) non-profit South Dakota corporation governed by a Board of Directors. The Alumni Office is located in the Surbeck Student Center. For more information regarding the Alumni Association, please visit or contact the office at (605) 394-2347 or via e-mail at alumni@sdsmt.edu.

SDSM&T Foundation

The South Dakota School of Mines and Technology Foundation is a tax exempt 501(c)(3) charitable organization that exists solely to serve the university by seeking the resources necessary to provide exceptional intellectual, professional, and personal development opportunities. Resources provided by the SDSM&T Foundation include student scholarships and graduate fellowships, the short-term loan program, general student assistance, faculty assistance, and areas of greatest need. Assistance is also provided to faculty for faculty development and research, educational leaves, travel costs, seminars, paper presentations, and educational support.

Campaigns to solicit funds from alumni and campus staff are held annually, as well as mini-campaigns for special purposes and an ongoing approach to corporations for support. The Foundation's portfolio is professionally managed and all accounts are audited yearly.

The Foundation Office is located in the lower level of the O'Harra Building.

Tech Ventures, Inc.

Tech Ventures, Inc. is a for-profit corporation wholly owned by the South Dakota School of Mines and Technology Foundation. Its purpose is to support commercialization of research projects linked to School of Mines faculty and researchers. Tech Ventures Inc. assists in all aspects from start up, to seeking venture capital, to operating the new companies. Through these partnerships, Tech Ventures generates unrestricted revenues used to support the university.