Strategic Plan
An Even Greater Team

SOUTH DAKOTA
SCHOOL OF MINES
& TECHNOLOGY
The nation needs more well prepared engineers and scientists to help meet the challenges of the twenty-first century. Engineering and science intensive industries account for 40 percent of the gross domestic product of the United States, and occupations in science, technology, engineering, and mathematics are projected to grow by almost 20 percent by 2022.

The South Dakota School of Mines & Technology will do its part to help meet this need. This strategic plan will guide our intentional growth and improvement through 2022.

The path to success in America is a great education. With the generous support of the taxpayers of South Dakota, as well as corporations, alumni, and friends of the university, we offer exceptional education at a price families can afford. As we grow and strengthen the School of Mines, we are committed to keeping college affordable for our students and their families.

While we prepare students for leadership in science and engineering professions, we also advance knowledge and its application. We seek to increase research and catalyze economic development in the Rushmore Region and beyond and foster a culture of innovation as we grow.

South Dakota Mines is a role model for engaged engineering and science education. We will continue to chart the course for excellence and continuously improve the quality of our program so that, around the nation and around the world, people recognize Mines as an exceptional engineering and science university.

Heather Wilson
President
GOAL ONE
Student Success: Prepare more undergraduate students for leadership in engineering and science.
GOAL

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STRATEGY 1-A: Implement aggressive enrollment plan to increase the undergraduate student body to 3,000.

Action Step 1-A-1: Execute a long-term action plan to generate sufficient numbers of quality applicants to achieve first-time freshmen and transfer student enrollment to yield approximately 5 percent annual growth in the undergraduate student population annually until 3,000 undergraduate students is reached.

Action Step 1-A-2: Grow summer high school programs to engage, inspire, and recruit the next generation of scientists and engineers.

Action Step 1-A-3: Attract and retain qualified undergraduate students by substantially increasing the annual scholarship dollars awarded.

Action Step 1-A-4: Evaluate and design enrollment strategy options for a smooth transition to a steady-state 3,000 undergraduate student body.

STRATEGY 1-B: Strengthen advising, counseling, and mentoring to improve retention at every stage.

Action Step 1-B-1: Establish and maintain an Academic Advising and Student Success Center specializing in assisting first-year students but available to all undergraduate students.

Action Step 1-B-2: Enhance the cross-functional retention working group to identify best practices and continuously improve processes, policies and programs that improve retention.

Action Step 1-B-3: Review and improve support, training, assignment, and evaluation processes for Departmental Academic Advisors.

STRATEGY 1-C: Enhance engaged and experiential learning in curricular and co-curricular programs as well as co-ops and internships.

Action Step 1-C-1: Enhance engaged and experiential learning in CAMP.

Action Step 1-C-2: Make undergraduate participation in high quality co-ops, internships, or research projects a signature experience of a Mines education.

Action Step 1-C-3: Develop and implement international co-op and internship opportunities for students.

Action Step 1-C-4: Expand study abroad opportunities.

Action Step 1-C-5: Review freshman engineering and science experiences in each major to ensure engaged learning is reflected in first-year curriculum.

STRATEGY 1-D: Advance student professional readiness through the Mines Advantage Program.

Action Step 1-D-1: Increase total student participation to 1,500 by 2020 with established annual incremental benchmarks for participation and completion.

Action Step 1-D-2: Increase faculty support and buy-in of the Mines Advantage program through meetings with department heads and faculty; meet with student organization advisors to make connections between Mines Advantage curriculum and the goals of student organization.

Action Step 1-D-3: Raise employer awareness of Mines Advantage and recognition of students engaged with the program by promoting and explaining the program to employers visiting campus for career fairs and recruiting events, and using the “Gold Mine” online recruiting system to solicit feedback from employers and alumni to market the program to students.

Action Step 1-D-4: Enhance assessment of the Mines Advantage curriculum.

Action Step 1-D-5: Secure funding to cover costs of the software for operating Mines Advantage and to continue the administration of the GPI assessment tool.

STRATEGY 1-E: Enhance recruitment, support, and mentoring for women, first-generation students, minorities, and international students.

Action Step 1: Enhance recruitment, support and mentoring for women.

Action Step 2: Enhance support and mentoring for minority students in conjunction with Regional Initiative.

Action Step 3: Enhance support and mentoring for international students.

STRATEGY 1-F: Fully integrate athletics into the Rocky Mountain Athletic Conference and strengthen access to educational opportunities for scholar-athletes.

(in development)
Research: Increase research to prepare science and engineering experts, advance knowledge, and catalyze economic development.
GOAL TWO

Research: Increase research to prepare science and engineering experts, advance knowledge, and catalyze economic development.

STRATEGY 2-A: Develop sustainable funding for doctoral education sufficient to graduate 20 PhD students per year.

(in development)

STRATEGY 2-B: Further develop and implement comprehensive doctoral recruitment plan.

Action Step 2-B-1: Focus international student recruitment effort on key nations and universities.

Action Step 2-B-2: Focus US recruitment at regional science and engineering schools and professional society conferences.

Action Step 2-B-3: Increase SDSM&T graduate programs visibility.

Action Step 2-B-4: Fully integrate graduate application, evaluation and enrollment process to leverage the university Enrollment Management System in tracking and attracting graduate student applicants.

STRATEGY 2-C: Improve private sector sponsorship, including intellectual property and licensing practices, to significantly expand research and catalyze innovation.

(in development)

STRATEGY 2-D: Develop and implement targeted enrollment plan to expand professional (non-thesis) Master’s programs.

Action Step 2-D-1: Review professional (non-thesis) masters’ offerings and particularly online professional programs with a goal of growth of enrollment.

Action Step 2-D-2: Increase graduate student completion of non-thesis MS degrees en route to PhD.

Action Step 2-D-3: Increase enrollment and graduation from existing Mines online professional programs.
GOAL THREE

Facilities: Redevelop and expand needed living, learning, and research spaces.
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**STRATEGY 3-A: HOUSING**
Plan and secure sufficient housing on or near campus for all freshmen and sophomores.

**STRATEGY 3-B: ENERGY**
Design and build an Energy Resources Center to support oil and gas research and teaching.

**STRATEGY 3-C: INNOVATION CENTER**
Design and build a Student Innovation Center for project-based learning and competitive engineering program expansion.

**STRATEGY 3-D: MINERAL INDUSTRIES**
Refurbish and rebuild Mining, Materials and Metallurgy Building to support research and teaching.

**STRATEGY 3-E: OLD GYM**
Restore and repurpose the Old Gym for teaching, performance, and faculty/staff space.

**STRATEGY 3-F: EAST QUAD**
Restore and refurbish laboratories to meet the needs of Chemistry, Applied Biology, and Physics/EE/Nano.

**STRATEGY 3-G: SURBECK**
Design and build expansion of Surbeck to accommodate expanded student dining and activity space.
GOAL 3: CAPITAL PROJECTS

Calendar is based on the typical BOR meeting schedule.

<table>
<thead>
<tr>
<th>Estimated Time Frames (Months)</th>
<th>Design/Engineering</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy Resources Center</td>
<td>9-15</td>
<td>30-36</td>
</tr>
<tr>
<td>Student Innovation Center</td>
<td>6</td>
<td>9-12</td>
</tr>
<tr>
<td>Mineral Industries Renovation</td>
<td>24-Phased</td>
<td>Phased</td>
</tr>
<tr>
<td>Music Center</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td>CBEC Southside Renovation</td>
<td>24-Phased</td>
<td>Phased</td>
</tr>
<tr>
<td>Surbeck Addition</td>
<td>9</td>
<td>18-24</td>
</tr>
</tbody>
</table>

Preliminary Facility Statement Approval
Development Phase (Fund-raising)
Selection of A/E Firm/Work Toward Program Plan Submittal
Program Plan Approval (Full amount of funding must be identified in this step.)
Facility Design Approval
Construction Phase
GOAL FOUR

People: Recruit, develop, and retain excellent faculty and staff.
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STRATEGY 4-A: Increase faculty support through private funds to promote excellence and achieve greater salary equity.

Action Step 4-A-1: Develop a faculty support financial goal as part of Mines capital campaign development plan with Foundation board and president.

Action Step 4-A-2: Develop standardized case statement for use with major donors on the impact, value, and options for creating or expanding faculty support, or multi-year support for faculty funds through the Foundation.

Action Step 4-A-3: Add endowed or multi-year faculty support to the array of items to discuss with major donors when that aligns with their interests.

STRATEGY 4-B: Strengthen and expand professional development opportunities at all levels of the organization.

Action Step 4-B-1: Implement Intercultural Development Inventory and design and implement professional development experiences to improve ability of faculty and staff to operate in an increasingly diverse workplace.

Action Step 4-B-2: Implement leadership training and development program for department heads, directors, and other key leaders.

Action Step 4-B-3: Implement an employee engagement assessment to establish baseline data to assist in development of employee programs and services.

Action Step 4-B-4: Strengthen focus on and opportunities for faculty development.

STRATEGY 4-C: Review and optimize recruitment, performance evaluation, and recognition processes to promote excellence and align with strategic goals.

Action Step 4-C-1: Revamp Employee Recognition Ceremony to better highlight employee recognition awards.

Action Step 4-C-2: Develop recognition programs to recognize faculty and staff contributions and/or efforts to Strategic Plan.

Action Step 4-C-3: Reassess Best Hiring Practices program layout and requirements.

Action Step 4-C-4: Review personnel evaluation and performance planning process to promote excellence and align with the values, mission, and goals of the university.
GOAL FIVE

Administration: Responsibly steward financial and physical resources.
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STRATEGY 5-A: Strengthen planning and budgeting practices to optimize fiscal management and tie budgets to the strategic plan.

Action Step 5-A-1: Develop improved instruction and research revenue and expense tracking procedures within current management information systems by both department/center and declared major to increase transparency and improve financial and program planning.

Action Step 5-A-2: Visit SDSU and USD campuses to consider what elements of their budget system might be applicable to a campus of our size.

Action Step 5-A-3: Improve budget reporting capabilities for all elements of the university.

Action Step 5-A-4: Review annual planning and budgeting cycle developed in 2013 and recommend revisions to university Executive Committee.

Action Step 5-A-5: Identify external support and enhance training opportunities for finance staff and Banner Users Group to improve system understanding, revise practices as needed, and embed practices for exceptional financial management of the university.

STRATEGY 5-B: Implement a systematic process for facility use, maintenance, and planning.

Action Step 5-B-1: Document and organize campus maintenance and repair information.

Action Step 5-B-2: Develop process for continual updating of maintenance and repair information for campus facilities.

Action Step 5-B-3: Develop process for facility use assignment.

STRATEGY 5-C: Review and improve business support services to enhance operations.

Action Step 5-C-1: Improve campus-wide access to reports written outside of the Banner software system.

Action Step 5-C-2: Training for students, faculty, and staff related to utilizing Banner and Banner-related reports, including Purchase Order and Reimbursement Requests.

Action Step 5-C-3: Review campus equipment and material purchasing processes to identify opportunities for cost reduction and campus employee satisfaction.

STRATEGY 5-D: Develop and implement a systematic process for risk assessment and mitigation.

Action Step 5-D-1: Research best practices used by other universities for total risk assessment and mitigation.

GOAL SIX

Development: Establish a robust culture of philanthropy to enable the university to sustain excellence.
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Development: Establish a robust culture of philanthropy to enable the university to sustain excellence.

STRATEGY 6-A: Develop and implement a strategy for embedding a culture of giving amongst students, alumni, and friends of Mines.

Action Step 6-A-1: Clarify the roles of the Alumni Association, University, Foundation, and Hardrock Club as entities in an effective development process of informing, cultivating, asking, and acknowledging donors and potential donors.

Action Step 6-A-2: Foster an “attitude of gratitude” by engaging students and their parents in our culture of giving back and making them aware of the generosity from which they are benefiting at Mines and the value of perpetuating this culture into their professional careers.

Action Step 6-A-3: Broaden our donor base across the community, state, and nation.

Action Step 6-A-4: Implement effective ways to strengthen operating funding sources to maintain effective capacity in all development team members.

Action Step 6-A-5: Strengthen implementation of development cycle in all phases, particularly identification, qualification, case development, and solicitation steps.

STRATEGY 6-B: Energize Mines fundraising and extend the culture of giving.

Action Step 6-B-1: Sustain and strengthen strong, positive relationships between the Foundation, the university, and other development team members.

Action Step 6-B-2: Engage more faculty and key staff in the philanthropic process as partners to foundation development officers, able to articulate the case for philanthropy and build relationships on which the Foundation can expand.

Action Step 6-B-3: Develop policies, procedures, training, and support for an integrated database so information is shared and relationships are jointly advanced for the long term.

Action Step 6-B-4: Evaluate and strengthen all university and department advisory committees to engage key alumni and university partners in the mission and needs of the university.

Action Step 6-B-5: Senior university leaders, particularly the President, will actively engage in development and fundraising activities.

STRATEGY 6-C: Engage alumni, corporations, community, and champions of Science, Technology, Engineering, and Math education in active partnerships.

Action Step 6-C-1: Actively and frequently communicate the message and value proposition of the university through consistent branding, messaging, and meaningful stories to develop a compelling case for philanthropic support.

Action Step 6-C-2: Ensure that relationships with natural partners at the university are positive and timely.

Action Step 6-C-3: Ensure that gifts to the university are appropriately acknowledged and celebrated.
AN EVEN GREATER TEAM
MINES STRATEGIC PLAN

GOAL ONE
Student Success
Prepare more undergraduate students for leadership in engineering and science.

LEAD: PROVOST/DEAN OF STUDENTS

STRATEGY
Implement aggressive enrollment plan to increase the undergraduate student body to 3,000. (1-A)

Strengthen advising, counseling, mentoring, and engagement to improve retention at every stage. (1-B)

Enhance engaged and experiential learning in curricular and co-curricular programs, as well as co-ops and internships. (1-C)

Advance student professional readiness through Mines Advantage. (1-D)

Enhance recruitment, support, and mentoring for women, first-generation students, minorities, and international students. (1-E)

Fully integrate athletics into the RMAC and strengthen access to educational opportunities for scholar-athletes. (1-F)

GOAL TWO
Research
Increase research to prepare science and engineering experts, advance knowledge, and catalyze economic development.

LEAD: VICE PRESIDENT FOR RESEARCH

STRATEGY
Develop sustainable funding for doctoral education sufficient to graduate 20 PhD students per year. (2-A)

Further develop and implement a comprehensive doctoral recruitment plan. (2-B)

Improve private sector sponsorship, including intellectual property and licensing practices, to significantly expand research and catalyze innovation. (2-C)

Develop and implement targeted enrollment plan to expand professional Master's programs. (2-D)

GOAL THREE
Facilities
Redevelop and expand needed living, learning, and research spaces.

LEAD: DIRECTOR OF FACILITIES

STRATEGY
Plan and secure sufficient housing on or near campus for all freshmen and sophomores. (3-A)

Design and build an Energy Resources Center to support oil and gas research and teaching. (3-B)

Design and build an Innovation Center for project based learning and competitive engineering program expansion. (3-C)

Refurbish and rebuild Mining, Materials and Metallurgy Building to support research and teaching. (3-D)

Restore and repurpose the Old Gym for teaching, performance, and faculty/staff space. (3-E)

GOAL FOUR
People
Recruit, develop and retain excellent faculty and staff.

LEAD: VICE PRESIDENT OF HUMAN RESOURCES

STRATEGY
Increase faculty support through private funds to promote excellence and achieve greater salary equity. (4-A)

Strengthen and expand professional development opportunities at all levels of the organization. (4-B)

Review and optimize recruitment, performance evaluation, and recognition processes to promote excellence and align with strategic goals. (4-C)

GOAL FIVE
Administration
Responsibly steward financial and physical resources.

LEAD: VICE PRESIDENT FOR FINANCE

STRATEGY
Strengthen planning and budgeting practices to optimize fiscal management and tie budgets to the strategic plan. (5-A)

Implement a systematic process for facility use, maintenance, and planning. (5-B)

Review and improve business support services to enhance operations. (5-C)

Develop and implement a systematic process for risk assessment and mitigation. (5-D)

GOAL SIX
Development
Establish a robust culture of philanthropy to enable the university to sustain excellence.

LEAD: FOUNDATION PRESIDENT

STRATEGY
Develop and implement a strategy for embedding a culture of giving in students, alumni, and friends of Mines. (6-A)

Energize Mines fundraising and extend the culture of giving. (6-B)

Engage alumni, corporations, community, and champions of STEM education in active partnerships. (6-C)
Our vision is for the South Dakota School of Mines & Technology to be recognized as an exceptional engineering and science university.

Our mission is to prepare leaders in engineering and science; to advance knowledge and its application; and to serve the state of South Dakota, the region, and the nation.