

SD BOARD OF REGENTS

FY22 BUDGET PRIORITIES



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FY22 BUDGET PRIORITIES SUMMARY

All One-Time Funding Requests

Description	Amount
BHSU – West River Health Sciences Center	\$90,000
BHSU – Paraprofessional Education Program	\$276,000
NSU – Center for Statewide E-Learning	\$468,850
SDSMT – Mineral Industries Building	\$19,000,000
SDSU – Precision Ag – Berg Agricultural Hall Remodel	\$2,000,000
SDSU AES – Precision Ranching	\$453,200
SDSU Extension – Rural Prosperity and Workforce Development	\$100,000
USD – Upgrade Equipment in Animal Resource Center	\$355,000

West River Health Sciences Center
\$90,000

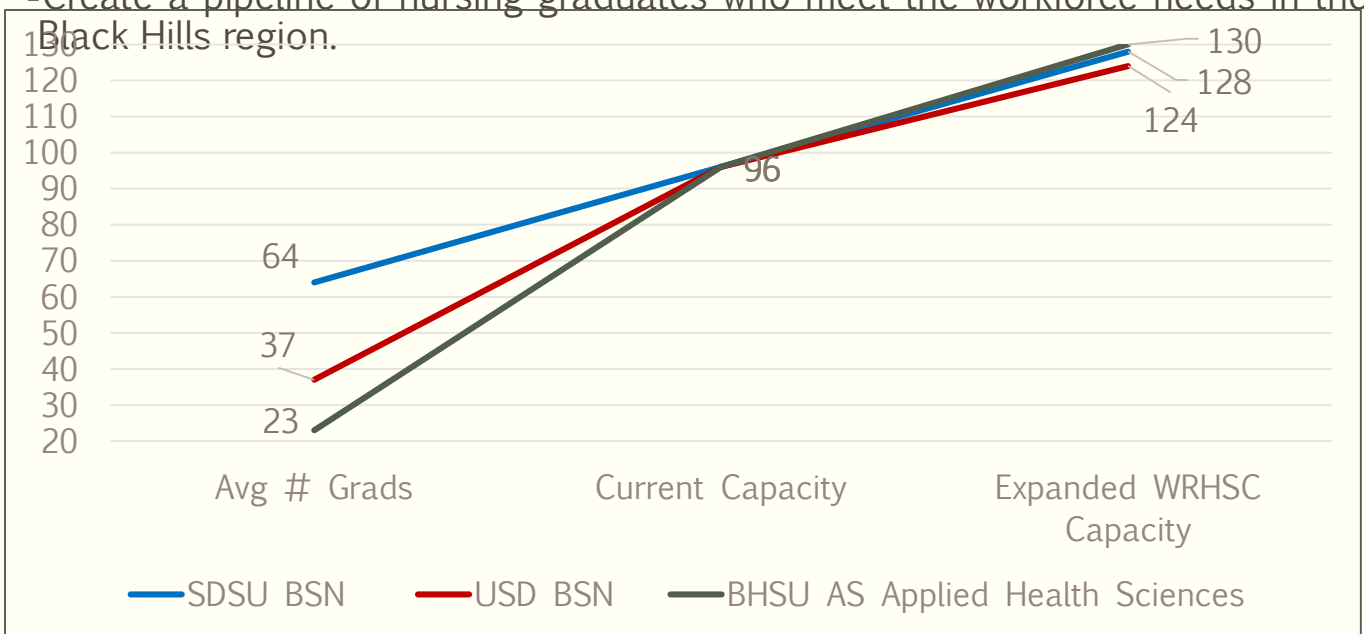


Black Hills State University has been working very closely with the local health care industry, legislators, and other interested parties to develop the West River Health Sciences Center (WRHSC) at the current Black Hills State University – Rapid City campus. The mission/purpose of the Center is:

- Visibility and exposure of nursing education options in Rapid City and the Black Hills Region.
- Coordinated recruitment and marketing – creating a pipeline.
- Recruit local and regional students into nursing programs.
- Increased enrollment capacity in West River nursing program.
- Assist recruitment into other health science programs as needed (OT, PT, dental hygiene, social work, medical lab science, pharmacy, respiratory therapy, etc.)
- Greater success in filling a dire workforce need
- One-stop center for students interested in enrollment in nursing/health science

Anticipated outcomes from the WRHSC:

- Create a pathway of applicants who are qualified to enter a Regental BSN nursing program in Rapid City.
- Leverage student support systems to ensure student retention and success
- Create a pipeline of nursing graduates who meet the workforce needs in the Black Hills region.



West River Health Sciences Center
\$90,000



One-Time Budget Request FY22

Description	Amount
Facility enhancements to create the WRHSC and signage	\$4,000
Marketing and recruitment	\$40,000
Technology infrastructure enhancements	\$26,000
Student support and tutoring	\$20,000
TOTAL	\$90,000

In-Kind Contributions

Description	Amount
Academic Coordinator	\$79,509
Operating Funds	\$8,000
Marketing	\$10,000
Academic advisors (SDSU, USD, BHSU)	\$79,727
Tutoring and testing services	\$24,520
Classroom Technology	\$40,175
Office Space	\$7,200
TOTAL	\$249,131

Paraprofessional Education Program
\$276,000



Black Hills State University is proposing the implementation of a cohort pilot paraeducation program for West River reservation schools. Schools on reservations have ongoing difficulty filling teaching positions with certified educators, the intent is that program would both increase the number of teachers on our reservations, but also increase the number of Native American instructors.

- The program is modeled after previous successful paraeducator programs:
 - 2016 legislation to create paraprofessional tuition scholarship program through BHSU & Sinte Gleska.
 - 2005-2008 SD Dept. of Education training of site bound rural paraeducators with BHSU, Montana State- Billings, and Casper College.
- Would provide a tuition assistance scholarship program to working paraprofessionals in schools primarily on Pine Ridge and Cheyenne River reservations.
- Participants will enroll in BHSU for up to three consecutive years or until attainment of a bachelor's degree in Elementary/Special Education with teacher licensure.
- Prior learning credit assessment; course work offered via zoom or on-line; field experiences and student teaching occurs at the student's school district.
- Expecting 20-25 graduates through this program who will continue to work while they learn.

One-Time Budget Request FY22

Description	Amount
Instructional Support	\$160,000
Tuition for 20 students	\$96,000
Computer Technology	\$20,000
TOTAL	\$276,000

Center for Statewide E-Learning and
University Course Delivery Infrastructure
\$468,850



Northern State University provides the delivery of online courses, hybrid courses, and full synchronous videoconference courses through the Dakota Digital Network to high school students all across South Dakota, including Native American students on reservations. Every videoconference session is securely live streamed and recorded for later viewing by students.

To allow for efficiencies, ensure infrastructure is robust enough to handle the delivery of courses and improve retention of general education courses, NSU is proposing to upgrade the video recording and livestream system while also combining the live monitoring system into one, state-of-the-art location. They also intend to incorporate the same technologies into fifteen existing general education classrooms. These technologies will allow students to review classroom instruction at their leisure or participate remotely should the need arise, including any future needs to vacate campus due to a defined emergency.

The ability to livestream and record general education courses is expected to enhance student academic success and improve retention and graduation rates. As higher education moves in the direction of more flexible teaching modalities to students, this support will allow NSU to stay at the forefront of the trend. The improvement of our options for flexible instruction is especially critical during the COVID-19 pandemic.

The new system will be migrated to a new platform to reduce maintenance of the system and increase the overall scalability of the system. This change will also allow NSU to move to Audio-Visual over Internet, a more current solution for connecting E-learning studios back to livestream systems. This network change will require NSU to upgrade network equipment to ensure there is a 10Gb signal path between E-learning studios and university classrooms to the recording and livestream systems.

The monitoring system will be expanded to allow technicians to monitor all live sessions and ensure sessions are trouble-free. The project will also require renovation of existing space to accommodate the video recording, livestream, and monitoring systems. Currently these systems are in different locations, resulting in inefficiencies of staff time.

A request for the Governor's COVID Relief Funds (CRF) has been made for this project. At the time of this writing, the status of such funding had not been determined.

Center for Statewide E-Learning and
University Course Delivery Infrastructure
\$468,850



One-Time Budget Request FY22

Description	Amount
Two video walls (consisting of six televisions each)	\$18,000
Encoders and decoders (31)	\$62,000
Matrox remote recorders (23)	\$48,300
48-port 10G switch with multicast and license	\$25,000
Video stream multiviewer appliance	\$5,000
Monitoring station PC	\$1,500
Shure Ceiling Microphone Array (15)	\$48,000
DSP (15)	\$34,500
PoE Camera (15)	\$42,750
Network lines	\$18,300
Transceivers	\$6,500
Fiber	\$5,000
Network consulting	\$4,000
Multimedia consulting	\$5,000
Room renovations	\$140,000
Furniture	\$5,000
TOTAL	\$468,850



Mineral Industries Building
\$19,000,000 General Funds
\$15,000,000 Private & Other Funds

South Dakota School of Mines & Technology is one of only five US universities offering ABET-accredited undergraduate majors in geology and geological engineering, mining engineering, and metallurgical engineering. Demand for SDSMT mineral industries (MI) is very high, with placement rates typically at or near 100% for the last several years.

The three MI departments have long recognized their interdependence in teaching and research. The close physical proximity of the MI departments has encouraged collaborative educational and research projects over the last 50 years. The MI facility, however, has never had a major renovation and the current 1960s-era layout of classrooms, laboratories, student work areas, and offices is “functionally obsolete,” dampening efforts to provide science and engineering education of the highest possible quality while advancing knowledge through research. The HVAC system has only been updated on one floor of one wing, and thus does not provide even basic temperature control. Additionally, the building needs improved ventilation for safe working with the materials for these disciplines.

SDSMT is requesting financial support to advance its MI programs. This funding will provide for the construction of a new MI building on campus. The total estimated cost for a new facility is \$34M. The university has been actively fundraising for this project and anticipates \$12M in private dollars will be available, as will \$3M from SDSMT’s share of the Higher Education Facilities Fund (HEFF).

The ultimate goal of the MI project is to create an environment that supports the delivery of a multi-discipline curriculum and research program. The following are the expected outcomes achieved by this goal:

- Improved learning experiences that incorporate the latest tools and technologies both within the classroom and in the laboratory, thereby ensuring a consistent pipeline of high-quality graduates;
- More effective recruitment of prospective students and faculty, as a modern facility will be a significant attraction to study and work at SDSMT;



Mineral Industries Building
 \$19,000,000 General Funds
 \$15,000,000 Private & Other Funds

- Ability to adapt quickly to growth in both student and faculty numbers through more efficient use of space;
- Increased interaction and cooperation of the MI programs, within the classroom and the laboratory, to provide graduates with a greater respect and knowledge of all MI disciplines;
- Increased opportunities for student collaboration with MI companies through interactive classrooms, student and faculty team areas, and laboratory facilities; and enhanced ability to collaborate with other MI universities across the country and internationally and to share education and research resources between these institutions.

One-Time Budget Request FY22

Description	Amount
New Building – General Funds	\$19,000,000
New Building – Private Funds	\$12,000,000
New Building – Other Funds	\$3,000,000
TOTAL	\$34,000,000



**SOUTH DAKOTA
STATE UNIVERSITY**

Precision Ag – Berg Agricultural Hall Remodel \$2,000,000

As the nation's first university to offer both a major and a minor in precision agriculture, South Dakota State University leads the way in the field. This expertise and experience helps South Dakota's industries lead the way in the use of precision technology and data.

SDSU graduates will be the leading innovators for optimizing production across highly variable lands. They are requesting \$2M toward completing funding to renovate Berg Agricultural Hall in conjunction with the construction of the Raven Precision Agriculture Center.

Berg Agricultural hall dates from 1953. Its advanced age presents challenges for employee environmental health and safety, research integrity and overall productivity. Completing the remodel will strongly position SDSU to continue growing its leadership position in precision agriculture research and innovation.

Total project cost for the renovation of Berg Agricultural Hall is \$10.5M. SDSU has identified \$6.5M in M&R to be allocated to the project and raised \$2M via fundraising. This \$2M request will complete the project.

One-Time Budget Request FY22

Description	Amount
Building Renovation – General Funds	\$2,000,000
TOTAL	\$2,000,000

Agriculture Experiment Station
Precision Ranching
\$453,200



South Dakota State University is positioned to be a global leader in precision ranching by developing grazing technologies while adding value and improving work-life balance for South Dakota's 12,000 beef producers. SDSU will create techniques that will fine-tune the role of beef cattle in a natural range ecosystem.

The South Dakota Agriculture Experiment Station will lead research and technology development to help measure cattle nutrient intake on an individual animal basis, monitor greenhouse gas emissions and remotely monitor and predict forage quantity and quality. Precision ranching research can help augment range beef cattle production through improving efficiency, welfare and range management, while providing ecosystem benefits and enhancing range sustainability.

The SDSU Precision Ranching Initiative would integrate technology into the SDSU Cottonwood Field Station to serve as a hub for precision ranching research. It will use precision livestock technologies such as monitoring devices to measure animal intake and movement, virtual fencing to better enable rotational grazing strategies, and drones to help manage forage quality. Mobile technologies would enable integration of precision ranching methods at additional sites, such as the West River Research Farm near Sturgis, for added livestock cover crop grazing work.. Given the increasingly changing environmental conditions in the Northern Great Plains, SDSU is positioned to be at the forefront of precision ranching by generating new knowledge and enabling producers and land owners to nimbly respond and adapt to changing conditions.

One-Time Budget Request FY22

Description	Amount
Virtual fencing	\$65,000
Animal intake monitoring systems	\$222,000
Methane and carbon dioxide measuring systems	\$165,000
Range/forage condition monitoring drone equip	\$1,200
TOTAL	\$453,200

Extension
Rural Prosperity and Workforce Development
\$100,000



While explaining the Connect South Dakota Initiative to expand broadband connectivity infrastructure in the state, Governor Kristi Noem said the internet holds the potential to connect South Dakotans to their neighbors locally and to their businesses globally. In 2017, the USDA Task Force on Agriculture and Rural Prosperity highlighted e-Connectivity as the first of five key indicators of rural prosperity.

During the 2019 legislative session, Governor Noem highlighted her intent to expand broadband access to rural sectors of the state, a critical need to support workforce development and economic prosperity for rural areas of the state.

While installing broadband technology infrastructure to rural places across the state is a challenge, the ability to understand and use the technology in strategic way is another. In anticipation, SDSU Extension proposes the Extension Broadband and Rural Technology program. This program will educate rural communities and its citizens about e-connectivity while providing innovative strategies for engaging the technology to build rural capacity. This program emphasizes workforce development and the engagement of broadband technologies through a remote work certification program entitled the Rural Online Initiative. Training modules lead to either a master remote work professional (employee) certificate or a master remote work leader (employer) certificate.

Funding will be used to establish training modules and certificate programs and then train identified SDSU Extension personnel in the program.

One-Time Budget Request FY22

Description	Amount
Program development	\$70,000
Training & travel expenses	\$15,000
Curriculum supplies	\$15,000
TOTAL	\$100,000



UNIVERSITY OF
SOUTH DAKOTA

Upgrade Equipment in Animal Resource Center \$355,000

The COVID-19 pandemic has revealed critical weaknesses in the United States' ability to discover and develop treatments and vaccines rapidly. Candidate treatments and vaccines are first proven in pre-clinical animal trials conducted under current Good Laboratory Practices (cGLP). Those that pass this first bar move into Phase 1 clinical trials to demonstrate their safety in humans and must be manufactured following current Good Laboratory Practices (cGLP).

The University of South Dakota is requesting \$355,000 to upgrade equipment and software in its Animal Resource Center to allow cGLP studies of candidate compounds and to acquire and validate cGMP compliant equipment for the production of vaccines.

This one-time investment will support \$3M in USD-proposed infectious disease research. Additionally, it will partner with local businesses in their efforts to develop COVID-19 treatments. Finally, it will provide a long-lasting training ground for both undergraduate and graduate students as they prepare for careers in biotechnology and medical product development.

A request for the Governor's COVID Relief Funds (CRF) has been made for this project. At the time of this writing, the status of such funding had not been determined.

One-Time Budget Request FY22

Description	Amount
Equipment and software upgrades	\$355,000
TOTAL	\$355,000