



**SOUTH DAKOTA MINES**  
An engineering, science and technology university

# University Cabinet

## September 25, 2023





**SOUTH  
DAKOTA  
MINES**

# Division of Student Success

## Strategic Plan

### Academic & Co-Curricular Excellence

- Achievement: Tandem Advising Program success
- Achievement: WiSE Scholars

### Research & Innovation

- Initiative: Career Services and Office of Professional Education collaboration
- Goal: Digitization of theses and dissertations

### Outreach & Engagement

- Achievement: Library services online usage increase
- Initiative: Mines Makerspace + Outreach

### Campus Culture

- Achievement: Devereaux Library – building usage
  - Initiative: Title IX changes
-

# TANDEM ADVISING @ SOUTH DAKOTA MINES

All first-year students have both a faculty and a professional advisor. Advisors work in tandem to provide 360 support to the student throughout their first year. The program started with a small pilot and, after seeing the results, university administration expanded the program campus-wide. One year in, first-to-second year retention rates rose from 73% to 82%\*.

## PROGRAM IMPLEMENTATION

01

### CHAMPION SEARCH

Found two natural champions: department heads of smaller programs, both passionate about student success

02

### COMPROMISE

Dept heads were unwilling to lose the faculty connection to first-year students. The compromise was a tandem structure.

03

### PILOT RUN

Used existing resources to do a low-stakes, one-year pilot and measured results.

04

### DATA

Partnered with IR to run retention rates after first year, which were compelling. Presented results to academic leadership.

\*Retention dropped to 73% in Fall 2021; steady-state ranges from 77-79%

Faculty Advisor:  
Curricular and  
career guidance,  
degree progress  
oversight

EAB's  
Navigate:  
creates  
holistic web of  
support  
across  
campus

Professional  
Advisor:  
Feeling connected  
to campus, home  
to college  
transition,  
academic  
strategies for  
success

Peer Mentor:  
Normalizing  
failure and  
struggle, feeling  
connected, getting  
involved,  
developing sense  
of community



## Department/Center/Program Highlights

### Results

- First to second year retention has increased (84.13%, highest since 2008)
- Under-represented retention is up (71.12% retention for Fall 2023 compared to 68.75% Fall 2021)
- First-generation retention has increased and stabilized (77.46% retention for Fall 2022; 76.42% for Fall 2023 as compared to 63.27% Fall 2021)
- Male retention has increased to highest ever (84.12% Fall 2022 retention compared to 80.83% in Fall 2022 and 69.33% in Fall 2021)
- Six-year graduation rate for the 2016 and 2017 Fall cohorts were significantly up from previous years (59.35% and 57.52% respectively, compared to 52.95% the previous year; steady-state numbers were around 50-52%)



**SOUTH  
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nANO



**BME**

BioSNTR  
Biosystems Networks / Translational Research  
IMPACT SCIENCE

IMAGEN



Nanophotonics



Biomedical Engineering



Nanomaterials and Cancer

# Nanoscience & Biomedical Engineering



## Department Strategic Plan

### Academic & Co-Curricular Excellence

- 30 ABET accredited BS BME degrees awarded, 119 BS, 11 MS, 16 PhD enrolled (50 PhDs, 60 MS awarded to date).
- Quantum Communications Certificate (pending in 2023)

### Research & Innovation

- NIH funding increase (NIH-R15, NIH-COBRE, new \$257K NIH award out of > \$1M), 2 new NSF Awards NSF ERI and NSF PFI (\$500K out of > \$2M)
- Establishing a quantum footprint: MonArk Quantum Foundry fully staffed, YR 1 NSF site visit complete (2023), industry partner Qubitekk (\$50K donation).

### Outreach & Engagement

- Prospective student engagement: 28 students and families since April at GoToMines, North Dakota events, 46 Student, Parent & Family visits since spring 2023.
- Summer Camps: CAMP BIOMED sold-out (Dr. Wood and others), STEM Explorations Summer Camp & Dakota Dreamers Summer Camp workshops on regenerative medicine (with Reptile Gardens, Dr. Ozdemir).

### Campus Culture

- Senior Design revamped, emphasizing collaborative projects across campus with industry sponsored projects.
- BMES activities including fund raising events and travel to Biomedical Engineering Society annual meeting, student travel to SFB meeting.



BME Senior Design Team



Quantum Communications



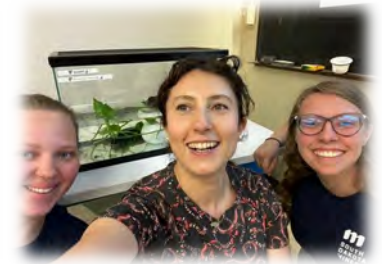
Nanomaterials and Cancer



Quantum Nanophotonics



Camp Biomed



STEM Explorations



BME Senior Design Sponsors



## NANO-BME Department Highlights

- List new faculty and/or staff. Miranda Larson (2023), Program Assistant I, Jenni Leberknight (2023), Adjunct faculty
- List new certificates, Quantum Communications (in review)
- List new courses NANO 402 Quantum Materials, 404 Nanophotonics, 405 Quantum Photonics and Comm. 406 Introduction to Quantum Computing, BME/BIOL 446/546 and Cell Biology (currently offered as topics), 4-400 level BME electives offered FA22/SP23
- List a few of the new research awards, Wood NSF PFI, Zhou NSF ERI, Scott NIH supplement, Zhou, Nelson Award, Ozdemir, Wood, 3D Center sub-award(s), Ozdemir NSF-RII-seed.
- List faculty awards, Wood and Wang promoted to Associate and tenured, Scott Wood 2023 Economic Development Award, Shan Zhou, Kavli Institute for Theoretical Physics, Brandon Scott, Chan Zuckerberg Imaging Scientist, Scott Wood, Chair, SFB Biomaterials Education SIG Chair.
- List student awards, Jinyuan Liu, best presentation overall in FY23 Research Symposium, Tolulope Ajuwon, best poster award SPIE Photonics West 2023, Hosain Mirazi, 2<sup>nd</sup> Place 2023 Governor's Giant Vision competition (CellField Technologies).
- List new industry partnerships or engagements, Qubitekk will provide \$50K quantum starter kit, Senior Design sponsors WarHorse Design, West River Electric Association, Provisional Patent on Peptides, negotiating license with Genesis Biosystems (Ozdemir).

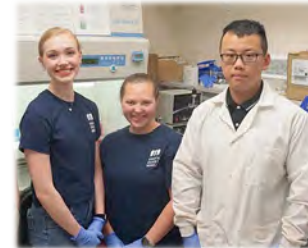
Miranda Larson Jenni Leberknight



Program Assistant Adjunct Faculty



Zhou, Kavli Institute Smith, invited speaker



Jinyuan Liu, 1<sup>st</sup> Place Tolulope, Best Poster





## BioSNTR/IMAGEN Center Highlights

- Facilities **established** (equipped) by the center: Lattice light Sheet Laboratory, Nano BMB lab, Snouty lab, Bio-AFM Lab
- Facilities established and maintained by the center: Biotech cell culture facility, chemical synthesis laboratory.
- Recent Awards affiliated with the center: NIH-COBRE, NIH-R15, NIH-supplement, Chan-Zuckerberg Award(s), NSF-CAREER award(s), NSF-PFI 2023
- Industry partnerships or engagements: Riipen, Rowhawk, Medtronics, Alumend, Immutrix, Sanford, Genesis Biosystems.



South Dakota Mines  
#SouthDakotaMines #nanotechnology

Congratulations to the Mines research team that just received National Cancer Institute funding for their innovation that reverses breast cancer! The grant focuses specifically on involving undergraduate students in the future cancer research! Read More: <https://bit.ly/33AA79r>



Mines Faculty Member Wins Prestigious NSF CAREER Award for Research to Slow Cancer Using Nanotechnology



Dr. Scott Wood, who is pioneering research on the causes of osteoarthritis at South Dakota Mines, is the winner of a highly prestigious CAREER Award from the National Science Foundation.

SD Mines Receives Imaging Scientist Grant for Cutting-Edge Live Cell Imaging



Brandon Scott, Ph.D., a postdoctoral researcher in Nanoscience and Nanoeengineering at SD Mines, adjusts part of the Lattice Light Sheet Microscope (LLSM) used to make dynamic 3D movies showing the inner workings of living cells.

Mines Faculty Member Wins Prestigious NSF CAREER Award to Research Osteoarthritis



Scott Wood PFI (2023)



Brandon Scott (2023)



National Institutes of Health



Established by BioSNTR

Maintained by BioSNTR



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# Monthly Reports

## Enrollment Management

- Admissions counselors are on the road! They plan to visit 182 college fairs by November.
- The free application period begins on October 1 and runs through November 30. This includes all states that are part of the South Dakota Advantage.

## Academics

- New curriculum items are beginning to work through the process at both CGE and UCC.
- The PhD in Chemistry and Biology should be on the October agenda of the BOR.

## Student Success

- Freshman to sophomore retention is slightly higher than last year at 83% versus 82%!
- Slide Rule is up and running! Here are some statistics since the beginning of the semester:
  - 1,851 distinct card swipes, representing 466 distinct students
  - Students have logged a total of 2,019 hours with a median time per student of 72 minutes. The Slide Rule has been open for about 20 days; therefore, students are logging about 100 hours per day.
  - An average of 12 to 13 students are in the Slide Rule at any given hour of operation.
  - These numbers are undercounts as some students forget to log in, while others forget to log out!



Applications, acceptances, and registrations:

	Fall 2020	Fall 2021	Fall 2022	Fall 2023	Fall 2024
Applications	228	231	300	270	291
Acceptances	111	107	182	156	181
Registrations	N/A	N/A	N/A	N/A	N/A
Transfers (Spring)	0	0	4	4	4
Transfers (Fall)	0	0	0	1	0

September 2023

## FINAL for Fall 2023

Current Accepted applications-enrolled (FINAL)	Fall 2023	3-yr avg	# change from 3-yr avg	% change from 3-yr avg
Current accepted applications	94	92	2	2.2%
Campus MS	64	66	(2)	-3.0%
Distance MS	13	16	(3)	-18.8%
PhD	17	10	7	70.0%
U.S. students	77	76	1	1.3%
International	17	16	1	6.3%
Accelerated*	33	38	(5)	-13.2%

## Yield\* for Fall 2023

enrolled/accepted	2020 Yield %	2021 Yield %	2022 Yield %	2023 Yield%
All	59%	67%	58%	57%
Campus MS	60%	68%	61%	62%
Distance MS	77%	90%	75%	48%
PhD	43%	46%	27%	49%
U.S. students	68%	76%	80%	68%
International	31%	44%	29%	33%
Accelerated*	78%	93%	100%	79%

\*Enrolled/Accepted

- Thesis/dissertation writing workshop Sept. 8
- Graduate Writing Center starting up!
  - PhD student TA to work with graduate students on writing and editing technical documents including thesis/dissertation
- Working group exploring ways to add more professional skills to nonthesis MS degrees

# Athletics



## Recent/Upcoming Alumni Events

### September

- Saturday, September 15 @ Noon – M-Hill Picnic
- Saturday, September 15 @ 6 PM – Hardrock Heritage Alumni Awards Gala
- Saturday, September 16 @ 1:00 PM – Homecoming Game vs CO Mines
- Thursday, September 21 @ 6:30 PM – San Jose Alumni Dinner
- Tuesday, September 26 @ 9:00 AM – Career Fair
- Saturday, September 30 @ 6:00 PM – BH Brawl in Spearfish
  - Twin Cities Watch Party @ 7:00 PM CT Park Place
  - Sioux Falls Watch Party @ 7:00 PM CT JJ's Billiards
  - Kansas City Watch Party @ 7:00 PM CT Gert's Grille
  - Houston Watch Party @ 7:00 PM CT 18Loft

## Upcoming Alumni Events

### October

- Tuesday, October 3 @ 5:00 PM – Alumni/Student Bingo
- Thursday, October 5 @ 11:00 AM – Lunch & Learn Mining Department
- Saturday, October 7 @ 12:00 PM – FB vs Western CO  
(Tailgate @ 11:00 AM)
- Sunday, October 8 @ 3:25 PM CT – Chiefs @ Vikings Alumni Game, Minneapolis
- Thursday, October 12 @ 11:30 PM – Thirsty's Lunch
- Friday, October 13 @ 7:00 PM – President's Dinner
- Saturday, October 14 @ Noon – Hardrockers FB @ CSM  
(Tailgate @ 11:00 AM)
- Saturday, October 21 @ Noon – FB Game vs Fort Lewis  
(Tailgate @ 11:00 AM)
- Tuesday, October 24 @ 6:00 PM MT – Alumni/ Student Online Trivia Night

## Upcoming Alumni Events

### November

- Thursday, November 2 @ 11:00 AM – Lunch & Learn Civil Department
- Saturday, November 4 @ 11:00 AM – FB vs Chadron State
- Tuesday, November 7 @ 5 PM – Alumni Student Bingo
- Thursday, November 9 @ 11:30 AM – Thirsty's Lunch
- Saturday, November 25 @ 6:00 PM – Rapid City Festival of Lights Alumni Area

### December

- Friday, December 1 @ 5:30 PM – New Alumni Welcome Reception
- Thursday, December 7 @ 11:00 AM – Lunch & Learn Physics IceCube - Neutrino Telescope at the North Pole
- Thursday, December 14 @ 11:30 AM – Thirsty's Lunch
- Saturday, December 16 @ 9:00 AM – Graduation



## Student Events

### November

- Thursday, November 2 @ 11:00 AM – Lunch & Learn Civil Department
- Saturday, November 4 @ 11:00 AM – FB vs Chadron State
- Tuesday, November 7 @ 5 PM – Alumni Student Bingo
- Thursday, November 9 @ 11:30 AM – Thirsty's Lunch
- Saturday, November 25 @ 6:00 PM – Rapid City Festival of Lights Alumni Area

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- Friday, December 1 @ 5:30 PM – New Alumni Welcome Reception
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## FY24 Annual Goals

Category	FY 23 Actuals	FY 24 Goals	FY 23 Actuals thru 8/31/22	FY 24 Actuals thru 8/31/23
<b>New Gifts and Pledges:</b>				
• Cash	\$ 9.43 M		\$ 766 K	\$ 0.92 M
• Stock	\$ 1.26 M		\$ 0 K	\$ 0.00 M
• Pledges	\$ 10.36 M		\$ 137 K	\$ 3.43 M
<b>Total New Money</b>	<u>\$ 21.05 M</u>	<u>\$18.00M</u>	<u>\$ 903 K</u>	<u>\$ 4.35 M</u>
• Gifts In Kind	\$ 43 K		\$ 0 K	\$ 0 K
• Estimated Heritage Society Gifts	\$ 2.89 M		\$ 0 K	\$ 0 K
• Pledge Payments	\$4.94 M		\$ 173 K	\$ 1.27 M

## FY24 Breakdown of Gifts (cash, stock & new pledges)

Area	As of 8/31/23
Scholarships	\$1,530,972
Department Support	\$599,488
Athletics	\$40,721
Faculty Support	\$0
Facilities	\$2,133,567
Mines Advancement Fund	\$45,303
CARA Endowment Fund	\$200
<b>Total</b>	<b>\$4,350,251</b>

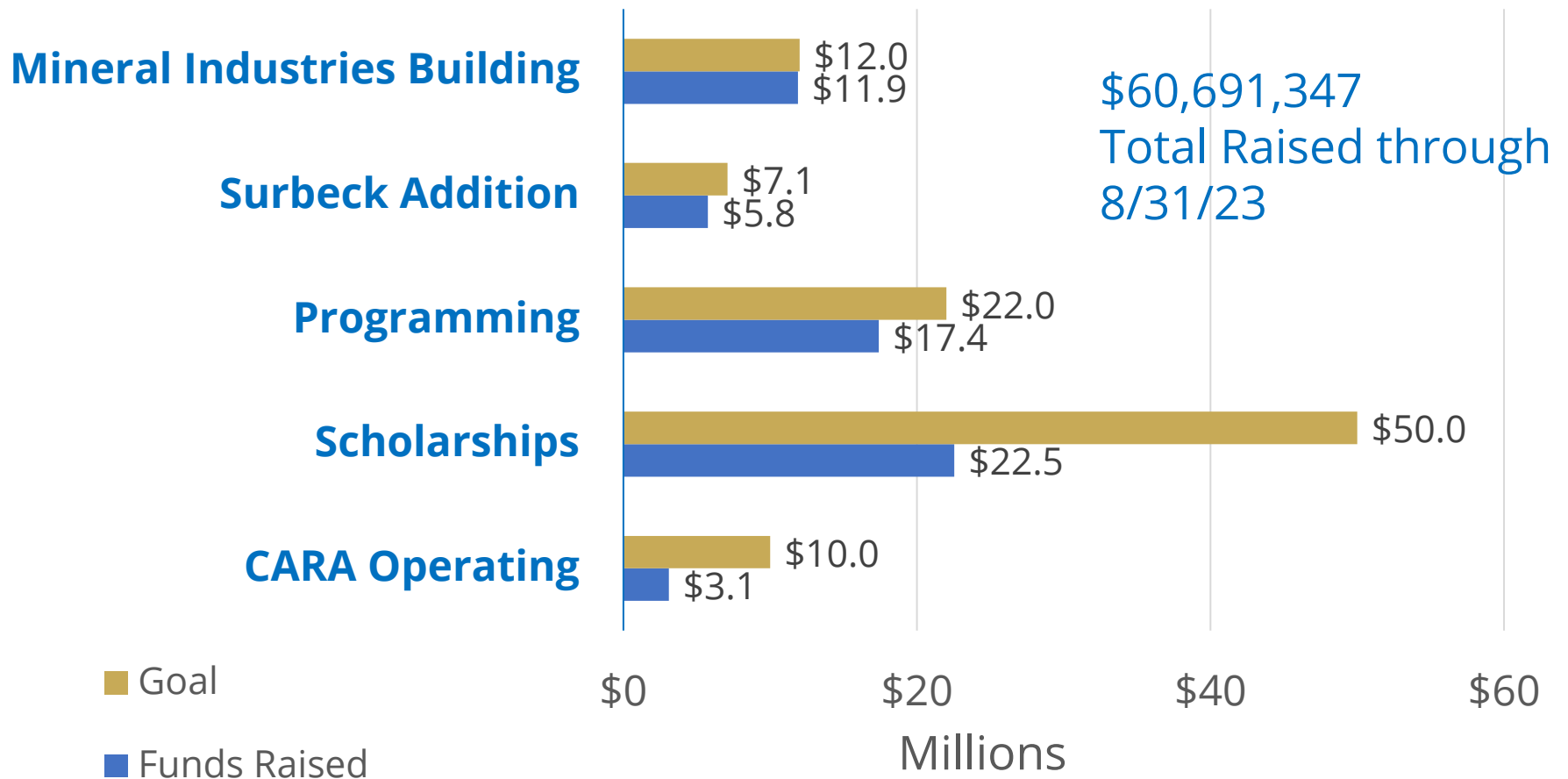


## FY24 Donor Goals

<b>Category</b>	<b>FY 23 Actuals</b>	<b>FY 24 Goals</b>	<b>FY 23 Actual thru 8/31/22</b>	<b>FY 24 Actual thru 8/31/23</b>
New Heritage Society Members	23	20	3	4
Gifts over \$10,000 (Unique Donors)	173	180	16	19
Total Donors	2,180	2,250	334	465

# New Heights: The Campaign for South Dakota Mines

## Campaign Pillars



## Traditions of Excellence Awardees

- August – Marigny Leon Casiano
- Nominations being accepted for September

## CSA Meetings

- Nov. 16

## 2023-2024 Council Members

Angela Mettler, CSA Chair

- *May 2024*

Shelly Tupper, Vice Chair

- *May 2025*

Anita Brenneman, Secretary

- *May 2024*

Amber Anderson, Council Member

- *May 2025*

Jenn Dusek, Council Member

- *May 2024*

- Unanimously approved Honorary Ph.D. recipients Linn Evans and Renita Mollman
- Per Melissa Hart: Requirement that two faculty be present with candidates during on-campus interviews discontinued
- University- and department-level P&T Committee elections ongoing
- Non-Tenure Track Advisory Committee election ongoing
- Discussed preliminary framework for campus-wide Peer Review of Teaching guidelines
  - Formed subcommittee

## **FY24 Operating Budget**

- Our overall enrollment numbers are basically flat for FY24 with a slight uptick in credit hours
- Consequently, our budget projections are currently accurate, as of the fall semester – no changes

## **Internal Controls Framework**

- Being built functionally – Academics/Finance/Research/Student Affairs etc.

## **Transact Card Access for Doors**

- Our Door Hardware and Software provider is getting out of the hardware business. Transact is moving to a new software called IDX and will use the outside company S2 for the hardware.

## **RFP for Stress Testing our Financial System**

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# Facilities, Risk, & Services



## NFE and CSA Position Description (PD) Updates

- Last year, as part of a BOR initiative to streamline CSA and NFE evaluations through our PeopleAdmin/YourFuture system, all CSA and NFE employees updated position descriptions (PD's). The new evaluation system pulls directly from the duties and expectations listed on the employee's position descriptions. It is crucial for PD's to be reviewed **each year** in the fall before the evaluation process starts because duties change and positions evolve over time.
- Any updates to PD's need to be completed, reviewed by supervisor, then sent to "Institutional HR" by **October 16, 2023**. We will be opening the NFE and CSA evaluation system in PeopleAdmin in October/November for supervisors (more information to come).

## Employee Benefits Health Incentive

### Live Well and Be Rewarded

#### Assess your current health status and earn a \$500 contribution\*

Each employee and their covered spouse (if applicable) must complete **both of the qualifications** listed below by April 1, 2024, for the employee to earn the \$500 contribution.

1. **Complete the [Online Health Assessment](#)** and customize your portal experience.
2. **Schedule your Annual Wellness Exam with blood work.** Use the [Biometric Screening Form](#) to show your primary care provider what blood work will need to be completed. Follow the instructions on the form and submit it to Total Wellness by April 1, 2024.

This exam is covered at no cost once per plan year under preventive care, when completed with an in-network provider. Cholesterol/lipid screenings, glucose screening (without A1C), and venipuncture associated with labs are covered at 100% when submitted with a preventive diagnosis.

#### Complete Well-Being Activities to earn up to \$400 contribution

Employees can earn points by completing well-being activities and turn those points into reward dollars. Completing 100 points will earn you \$100. You can complete this up to 4 times to earn the maximum \$400 contribution.

All point activities are listed on the portal. Click continue under the Earn Points section of Rewards.

To learn more view or download the [LiveWellSD Program Guide](#).

- **Software Development**

- Setting up new faculty and students

- **Networking & Security**

- Wifi Tweaking (MI building in particular)
- Enrolling more Fac/Staff machines into our cloud based PC configuration management
- Upgraded residence hall door software to support new version of Transact server

- **Helpdesk/Classroom Support**

- Laptop handout for incoming students
- Laptop upgrades for students with 4 year old laptops
- Upgraded hardware in some classrooms
- D2L support for start of semester

## Website Redesign Project

- Design phase is complete.
- Rewriting of website pages will start next week.
- Website core team will work with SMEs across campus.
- Departments will have opportunities to review content.
  
- Project launch date: June 2024

Website Project Updates:

<https://www.sdsmt.edu/website-redesign-project/>

## Intranet

- Content has been identified
- Structure and build out phase to start soon

## Recruitment Ad Campaigns kicked off early September

16 ad campaigns (10 are program specific)

Goal: increase brand awareness, visits and inquiries

## Staffing Changes

Ann Brentlinger – stepping down from Director of MC, moving to new role on campus: Director of Industry & Community Engagement



## Social Media (YoY comparison):

- Total Impressions: 403,835
- Total Engagements: 39,566
- Total Post Link Clicks: 9,738
- Video Views: 25,302
- Monthly Engagement Rate: 9.8%

## Top Social Media Post



Frosh get Beanie Hats on Facebook  
-3,338 engagements  
-479 reactions  
-17 comments  
-13 shares  
-85 link clicks

## Traditional Media:

South Dakota Mines ranked top 10 recommended university by the Wall Street Journal

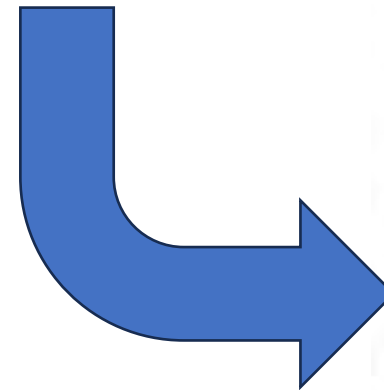


### Top 10 Recommendation

The schools among the WSJ/College Pulse 2024 Best Colleges in the U.S. that were most highly recommended by their surveyed students and recent alumni.

1. Brigham Young University
2. Dalton State College
2. Rose-Hulman Institute of Technology
2. The Master's University
5. Brigham Young University - Idaho
5. Massachusetts Institute of Technology
5. Tarleton State University
8. Florida Institute of Technology
9. South Dakota School of Mines & Technology
9. Washington & Lee University
9. Williams College

Ties are listed in alphabetical order. Source: WSJ/College Pulse 2024 Best Colleges in the U.S.



## Mailchimp:

Monthly @ Mines: 27.7% open rate

President's Letter Aug. 9: 54.3% open rate

President's Letter Aug. 23: 56.2%

The Forefront: 23% open rate

- NFE of the Month – August
  - Diana Eastman – Registrar
- Monthly NFE Events for Fall:
  - September: Yard Games
  - October: Curiosities of Campus
  - November: Friendsgiving Potluck
  - December: Holiday Social

## Office Updates:

- First President's Leadership Academy speaker Steve Newlin was on campus Sept. 20-21
- NSF Engineering Research Center site visit will be occurring on Oct. 11-12
- Looking at partnership opportunities in Suriname with SD National Guard
- Currently searching for new event coordinator; Rachel Skea's last day with Mines was 9/16

## President's Upcoming Travel:

- Oct. 1-3 RMAC meetings in Salt Lake City
- Oct. 11 POET Bioprocessing Grand Opening in Brookings
- Nov. 1-2 CAT/Komatsu visit in Peoria

## Upcoming Events:

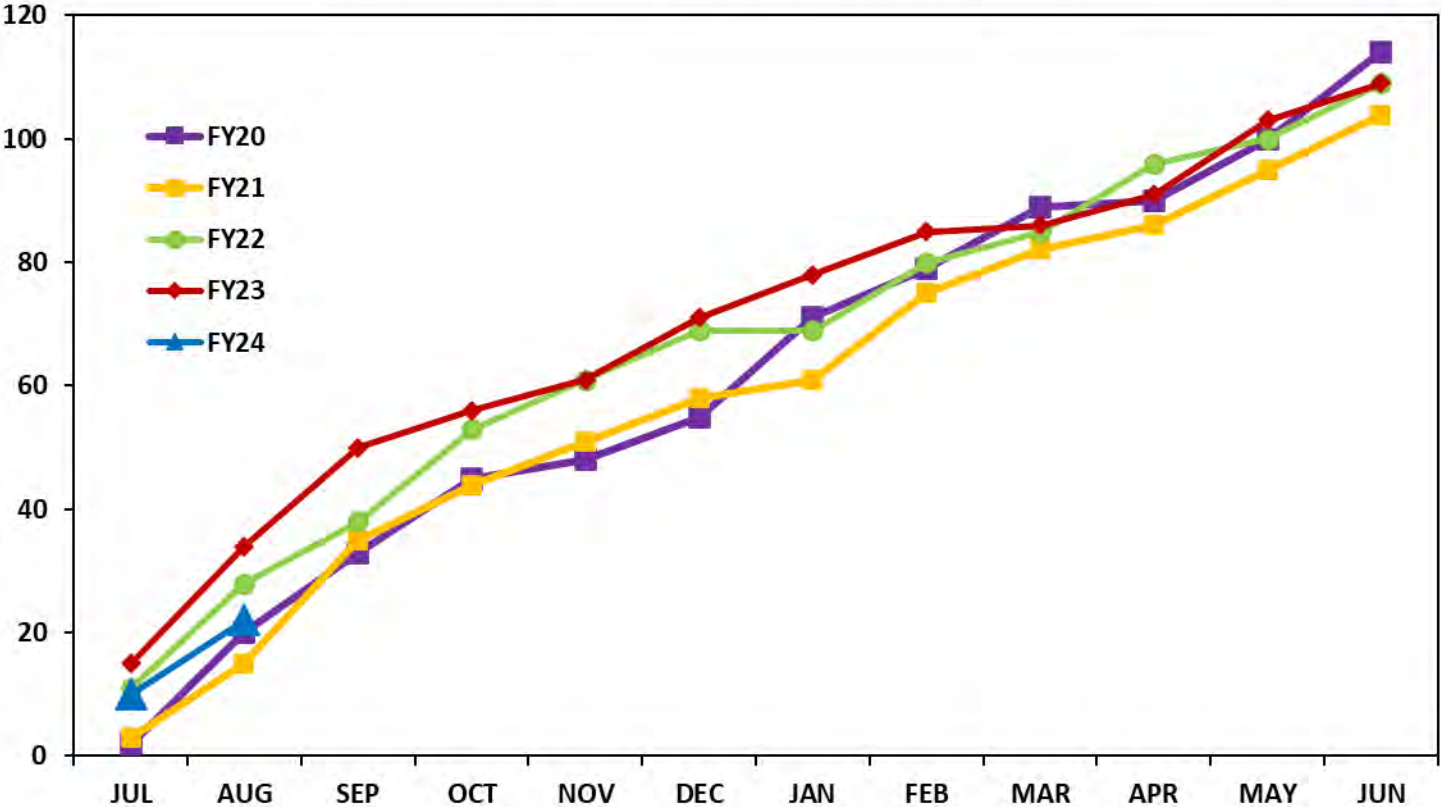
- **Oct. 4-5**      **Board of Regents Meeting on Campus**
- **Oct. 13**      **President's Dinner**  
\*also April 12 – Sioux Falls
- **Oct. 17**      **President's Leadership Academy Speaker –**  
**Linn Evans, CEO of Black Hills Corp.**
- **Oct. 27**      **University Advisory Board**
- **Dec. 1**        **Faculty & Staff Holiday Social**
- **Dec. 2 & 3**   **Holiday Concerts at Cathedral**
- **Dec. 16**      **Fall Commencement**

## Updates

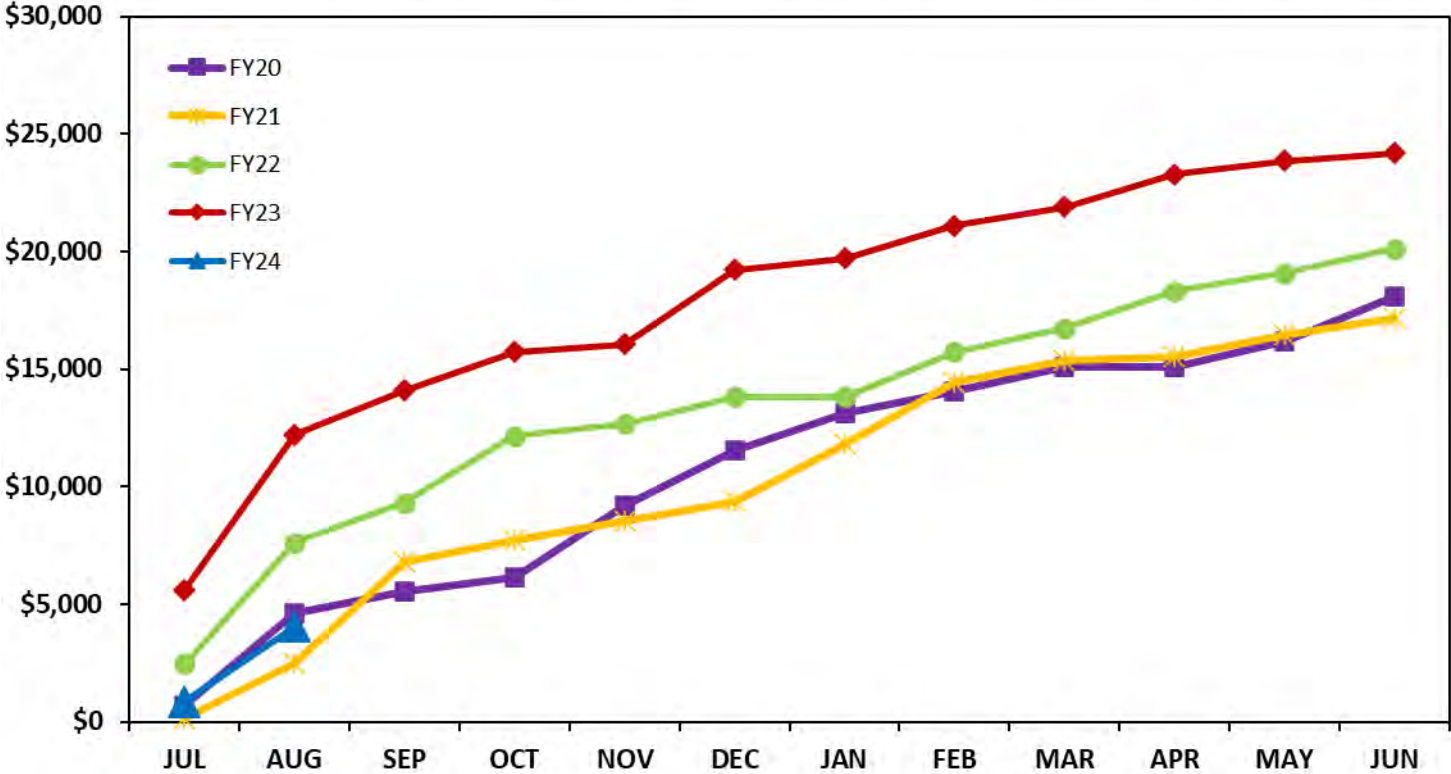
- **Awards over \$500,000**
  - Alevtina Smirnova: SD Board of Regents
    - SD Center for Electrochemical Energy Storage
  - Jon Kellar: SD Board of Regents
    - Governor's Center for Understanding & Disrupting the Illicit Economy
  - Weibing Xing: NASA
    - Scalable, High Energy Density Lithium-Sulfur Batteries
- **Events (past and upcoming)**
  - South Dakota National Guard: Aug 25
  - Naval Undersea Warfare Center Keyport (WA): Sep 5-8
  - South Dakota National Guard: Sep 27
  - DOE EPSCoR: Sep 28
  - SD EPSCoR (NSF, NASA, NIH): Oct 25 or 26



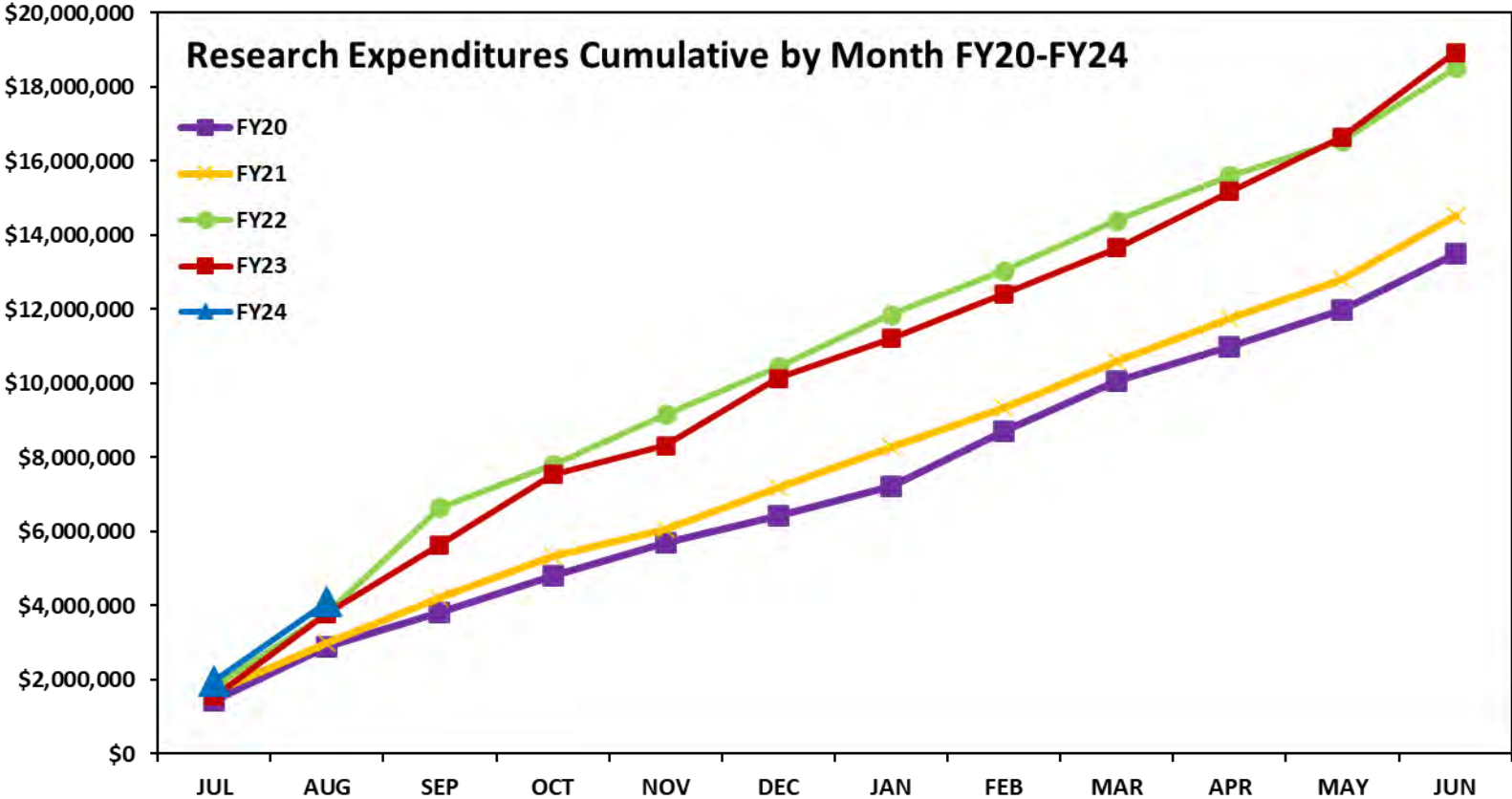
## Cumulative Number of Awards by Month FY20-FY24

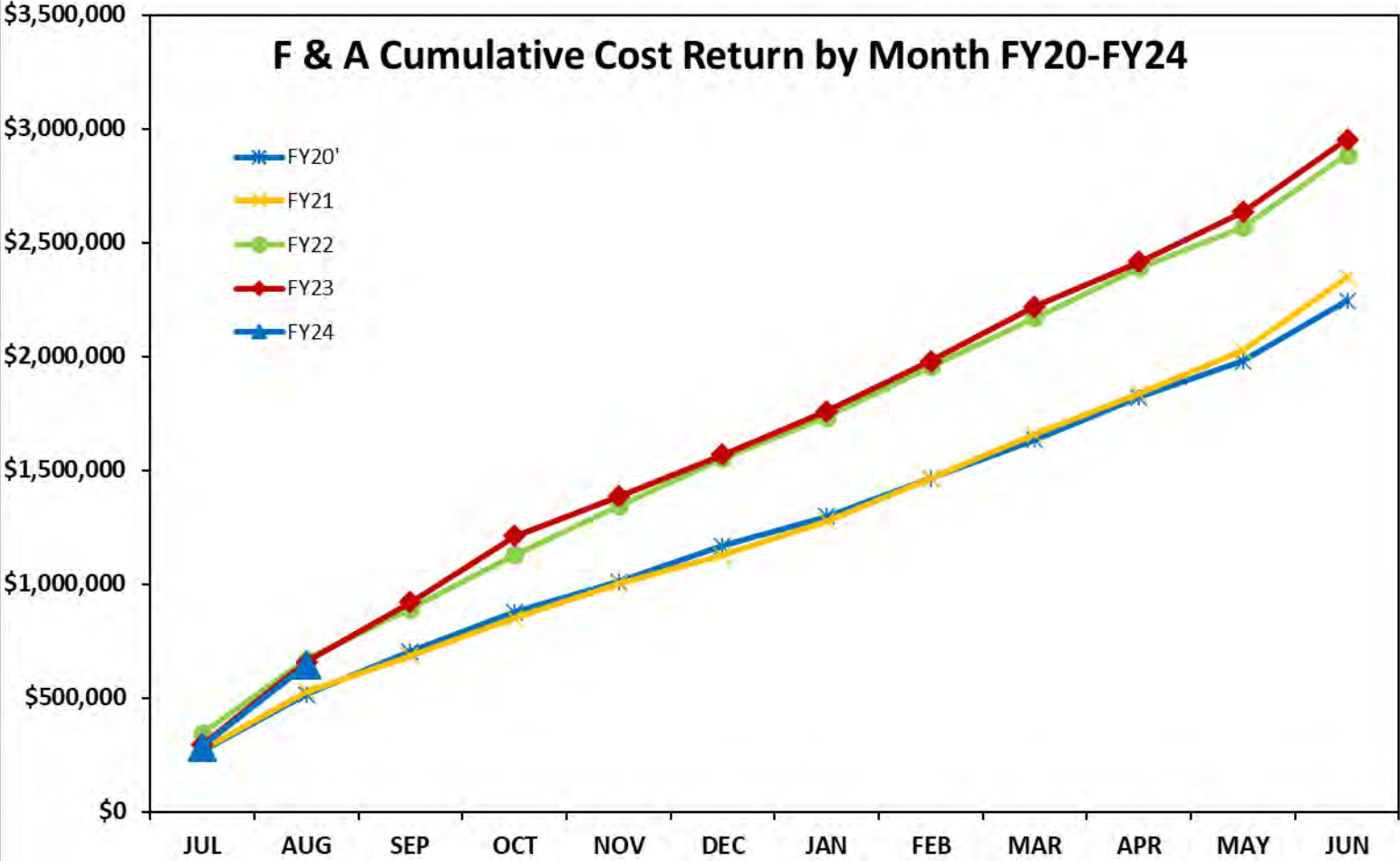


## Cumulative Value of Awards (\$ K) by Month FY20-FY24



# Research Affairs





# Student Association





# Student Development

## Updates

- Chalk the Walk and Suicide Prevent Event Held on 9/20
- South Dakota Mines Received the Gladys Pyle Award from Secretary of State Monae Johnson on 9/19
- Dean of Students and Student Engagement Offices Have Moved to Upper Surbeck Center

## Upcoming Events

- 9/27- Walk to the Farmer's Market
- 9/28- National Hazing Prevention House Party at Theta Tau
- 9/29- Admin Night at ISI House
- 10/2- Local Government PDP Session
- 10/4- Kitten Yoga
- 10/10- Student Flu Shot Clinic
- 10/13- Non-Verbal Communication PDP Session
- 10/16- Students Volunteering at Feeding SD  
- 2nd Student Flu Shot Clinic
- 10/17- Exploring Worldview PDP Session
- 10/19- Cultural Etiquette Dinner
- 10/20- Family Weekend Begins

