

DAKOTA STATE™ MAGAZINE

FALL 2024



TROJAN NIGHTS



Old Dominion performing at the Trojan Nights kick off concert.

CONTRIBUTORS

DSU Marketing & Communications

Andrew Sogn, Chief Marketing Officer

Jane Utecht, Strategic Communications Coordinator

Jen Burris, Strategic Communications Coordinator

Andrea Tanner, Senior Graphic Designer

Jena Martin '05, Production Center Coordinator

Photo Contributors

DSU Marketing & Communications

Emily Weber

First PREMIER Bank/PREMIER Bankcard

On the Cover

President Griffiths thanked major donors to the Beacom PREMIER Complex with signed guitars from the artists at the kickoff concert on August 27. Left to right are Miles & Lisa Beacom, Matt Hocks from Sanford Health, and Brian Kern. Photo courtesy First PREMIER Bank and PREMIER Bankcard.

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Dakota State University in Madison, S.D. offers undergraduate, master's, and doctoral programs through its College of Arts & Sciences, The Beacom College of Computer & Cyber Sciences, College of Business & Information Systems, and College of Education & Human Performance.

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GREETINGS, ALUMNI AND FRIENDS OF DAKOTA STATE UNIVERSITY.

We often use words that begin with “D” to describe Dakota State, words such as dedicated and determined.

Several of these applied to the start of the fall semester, which was dynamic and distinctive, and we were driven — driven to have everything ready for our students before the first day of classes on August 26.

This year, our faculty and staff put in dynamic efforts to prepare for the academic year. In addition to traditional preparations, we needed to set up temporary accommodations for our fine arts staff as we renovate Beadle Hall, and put the final touches on our new athletics events center — the Beacom PREMIER Complex and Brian Kern Family stadium — which opened in August.

But distinctive is the word that may best apply to the beginning of the academic year. We planned a two-night kickoff celebration, which we called Trojan Nights, to open our new events center, stadium, and football field. On August 27, we hosted a concert featuring Old Dominion, Brothers Osborne, and Elle King, with about 6,000 of our closest friends, thanks to exclusive sponsor First PREMIER Bank and PREMIER Bankcard.

That wasn’t distinctive enough, so we also celebrated two days later with the first football game of the season, the 2024 Ag Bowl!

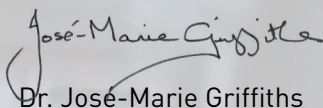
Yet the word heard repeatedly that week did not start with a D, but an “L” — Legacy. Many people called the new athletics complex a symbol of Dakota State’s continuing legacy.

This physical complex is something that we will pass on to future generations as a place where our students can use their dedication and determination to succeed, but our legacy — our collective cultural inheritance — is also seen in other places and other ways.

It’s in the career success of our alumni. It’s in the competitive efforts of our students. It’s in the innovative ideas of our college faculty. It’s in the efforts of our Foundation staff. It’s in the people who believe in and support our mission with their time and energy.

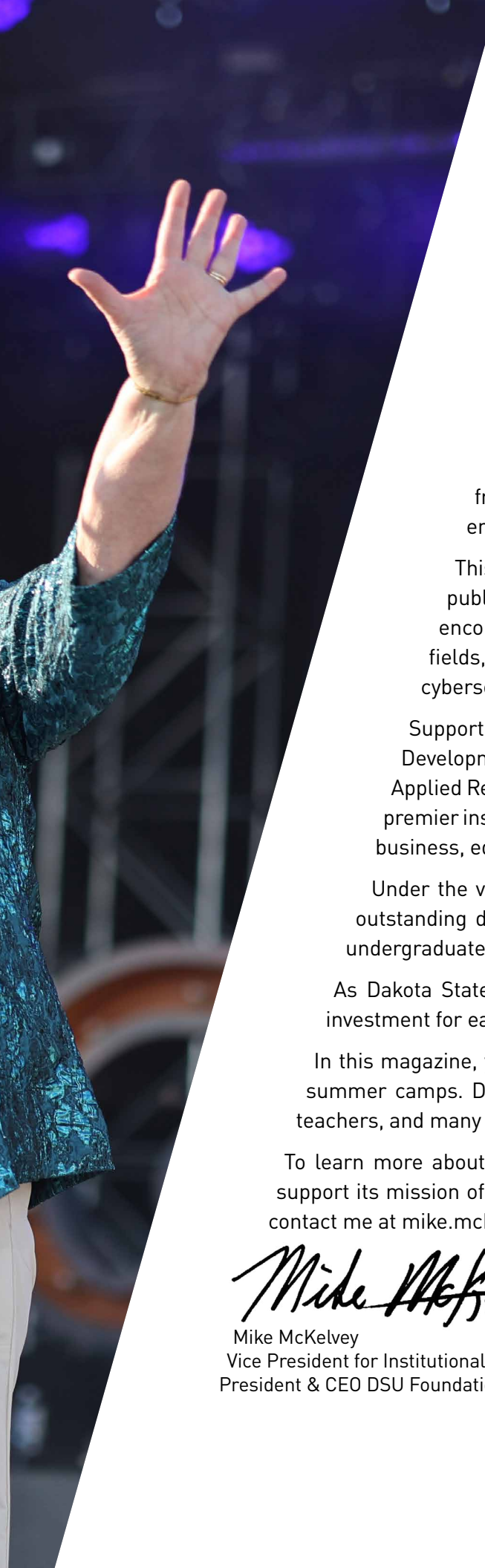
Our legacy is part of this heritage, and we will pass this attitude on to the future generations of Trojans.

Warmly,



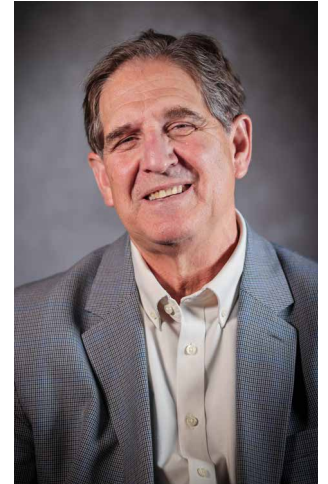
Dr. José-Marie Griffiths
President
Dakota State University





DEAR ALUMNI AND FRIENDS OF DAKOTA STATE UNIVERSITY,

In my first five months in this position, I have witnessed firsthand the extraordinary commitment to DSU's legacy from our alumni, faculty, staff, friends, parents, and students through their engagement, giving, and service.



This collective effort continues to position DSU as the premier small public university with the nation's best applied programs of study, encompassing cyber-intensive and cyber-infused majors in numerous fields, including emerging technologies such as AI for cybersecurity, cybersecurity for AI, and cybersecurity for quantum computing.

Supported by three powerhouse enterprises - Research & Economic Development (RED), the Applied Research Lab (ARL), and the Dakota State Applied Research Corporation (DARC) — the university also upholds status as a premier institution for applied research in many areas, including arts & sciences, business, education, as well as cybersecurity, AI, and quantum computing.

Under the visionary leadership of President Griffiths and the dedication of our outstanding deans and faculty, we lead the nation in the placement rate of our undergraduate and graduate students in these cutting-edge fields.

As Dakota State continues to RISE, there are opportunities for a fantastic legacy investment for each philanthropic partner aiming to make a transformational impact.

In this magazine, you can read about examples of this legacy, such as the residential summer camps. DSU serves as a national model to inspire young girls, young boys, teachers, and many other groups to become tomorrow's leaders in cyber.

To learn more about establishing a very personal and confidential legacy with DSU to support its mission of changing the lives of today's youth and tomorrow's leaders, please contact me at mike.mckelvey@dsu.edu or call (503) 828-5705.



Mike McKelvey
Vice President for Institutional Advancement
President & CEO DSU Foundation



DSU student, Sean Lindholm, made this Plein Air drawing of Beadle Hall in spring 2024.

RENOVATING BEADLE HALL INTO A HORROR GAME

The current Beadle Hall renovation project allows a unique opportunity for the computer game design program to capture the space's essence and help it live up to its rumored haunted past.

When Professor Tom Jones began teaching on campus in 2000, he heard the rumor that Beadle Hall, DSU's longest-standing building, is haunted by the ghost of General Beadle, DSU's third president.

Beadle Hall opened in September 1886 and has been through smaller renovations over the years, as well as names. Originally named West Wing, it was renamed in 1970 in honor of General William Henry Harrison Beadle.

At some point, rumors started that the building was haunted, and Jones witnessed some inexplicable events at times, such as all the CD drives opening at the same time in the Mac lab.

In the past, Jones organized ghost hunts, helping a group of students setting up video cameras with night vision, audio recorders, and electromagnetic field (EMF) readers to capture footage in Beadle Hall.

They caught a cloth floating in the second-floor hallway and an orb moving from the floor to the ceiling on the video.

At the time, Jones said, "I can't tell you that Beadle Hall is not haunted because some of the things that happened are so bizarre they can't be explained."

With this lore and the chance to access the empty building before construction began, the computer game design program decided they wanted to make a horror game set in Beadle Hall.

After the building's contents were removed, Assistant Professor Peter Britton spent two hours capturing images of the vacant Beadle Hall with an Insta360 camera.

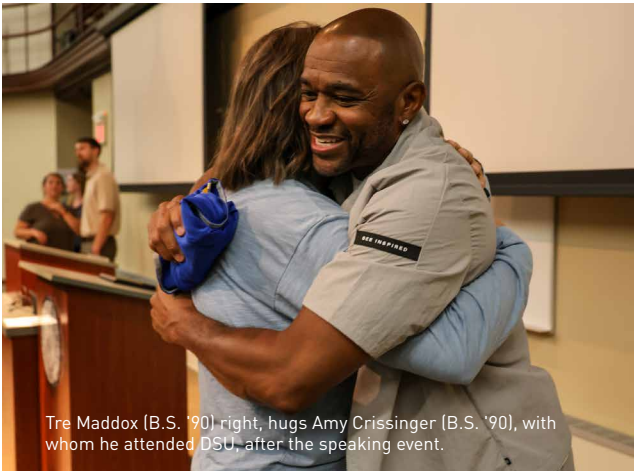
It took another 16 hours for the images to be processed with the software Matterport to capture the space in 3D. The goal is to use the building as the setting for a future game created by DSU game design students.

"Hopefully, students will be interested in creating a VR horror game inspired by Beadle Hall's mythical hauntings," Britton said.

Beadle Hall has been recognized as the oldest state building still used for its original purpose. The project is expected to be completed in the summer of 2025.

HARD WORK IS KEY TO SUCCESS

Club brings alum to campus to speak



Tre Maddox (B.S. '90) right, hugs Amy Crissinger (B.S. '90), with whom he attended DSU, after the speaking event.

TriBeta, an honors biology club, invites speakers to campus each semester to talk to students about their areas of expertise. Past speakers have included alumni who have gone on to interesting careers such as orthopedic surgery. A lecture on drug development was presented by experts not affiliated with DSU.

Dr. Andrew Sathoff, assistant professor of biology and advisor to the TriBeta Club, lets the students select the guest speakers, and this fall, they invited alumnus Tre Maddox (B.S. '90) to campus to speak with students and the DSU community.

Maddox is a graduate of the College of Business and Information Systems, with a degree in Business Administration, and has just started his 14th season as an NBA referee. He is one of only 74 people who hold the elite position.

TriBeta Club students first learned about Maddox from Sathoff, who heard about the

alum's journey to the NBA from Professor Emeritus Dale Droge. Droge's sister-in-law (Patricia Ericcson) was part of a family that became a surrogate family for Maddox while he was attending DSU.

"Some of my favorite memories were playing basketball and participating in track and spending time with the local Ericcson (Dick and Patricia) family," Maddox said. "They took me in and were my family away from home."

While on campus this fall, Maddox took a tour of the new athletics and campus facilities, met with student-athletes, attended the annual Ag Bowl game in the brand-new Beacom PREMIER Complex and Brian Kern Family Stadium, and conducted his speaking engagement.

Maddox shared about his journey from student-athlete at Dakota State to owning his own commercial cleaning business while developing his refereeing career.

He stressed that lifelong learning is necessary for any path one takes through life, explaining that there are many phenomenally talented people, but those who commit themselves to practicing and striving to be their best will have the most impact.

"It takes hard work... to get where you're trying to go, in whatever craft it is that you do," he said.

TROJIAN ZONE

GAME DAY GEAR



SCAN TO SHOP



CAMPUS / ONLINE / STADIUM

ALUMNUS TAKES HELM AT STATE BUREAU OF INFORMATION & TELECOMMUNICATIONS

Madhu Gottumukkala (Ph.D. '23) started a new job this year – twice.

In late summer, he was named chief technology officer at the South Dakota Bureau of Information & Telecommunications (BIT). After only a few weeks on the job, Governor Kristi Noem promoted him to BIT commissioner. The previous commissioner left to take a similar position in Wyoming.

Noem said, “South Dakota has made tremendous investments to improve our IT infrastructure, and Madhu is the right person to carry that momentum forward.”

Gottumukkala brings a wealth of training and experience to this role, with over 20 years in IT and his Ph.D. in Information Systems from DSU. He also holds a Master of Science from the University of Dallas. He has previous leadership experience, including five years as Senior Director of IT for Business Solutions at Sanford Health.

“I’m deeply grateful to Governor Noem for the trust placed in me, and I am eager to make a meaningful impact by driving innovative and secure technology solutions across our state,” said Gottumukkala.

He is working closely with the government and communities in South Dakota to enhance the state’s digital infrastructure, empower its citizens, and build a stronger, more connected future for all South Dakotans. To do this, he is using skills learned in his doctoral studies.

“The hands-on, practical focus of DSU’s curriculum enabled me to seamlessly integrate my academic work with my professional responsibilities,” he said.

“My research and dissertation, in particular, have directly contributed to solving critical challenges, such as ensuring seamless information exchange across healthcare systems.”

His research project was in the field of healthcare interoperability, which laid a foundation for strategic problem-solving and innovation in his current role.

“The specialized knowledge I gained, particularly in healthcare systems and interoperability, allowed me to solve real-world problems in my previous roles, including my time at Sanford Health. Now, as Commissioner and CIO for BIT, the leadership skills and strategic thinking developed during

my doctoral journey continue to shape my approach to technology-driven solutions for state government.”

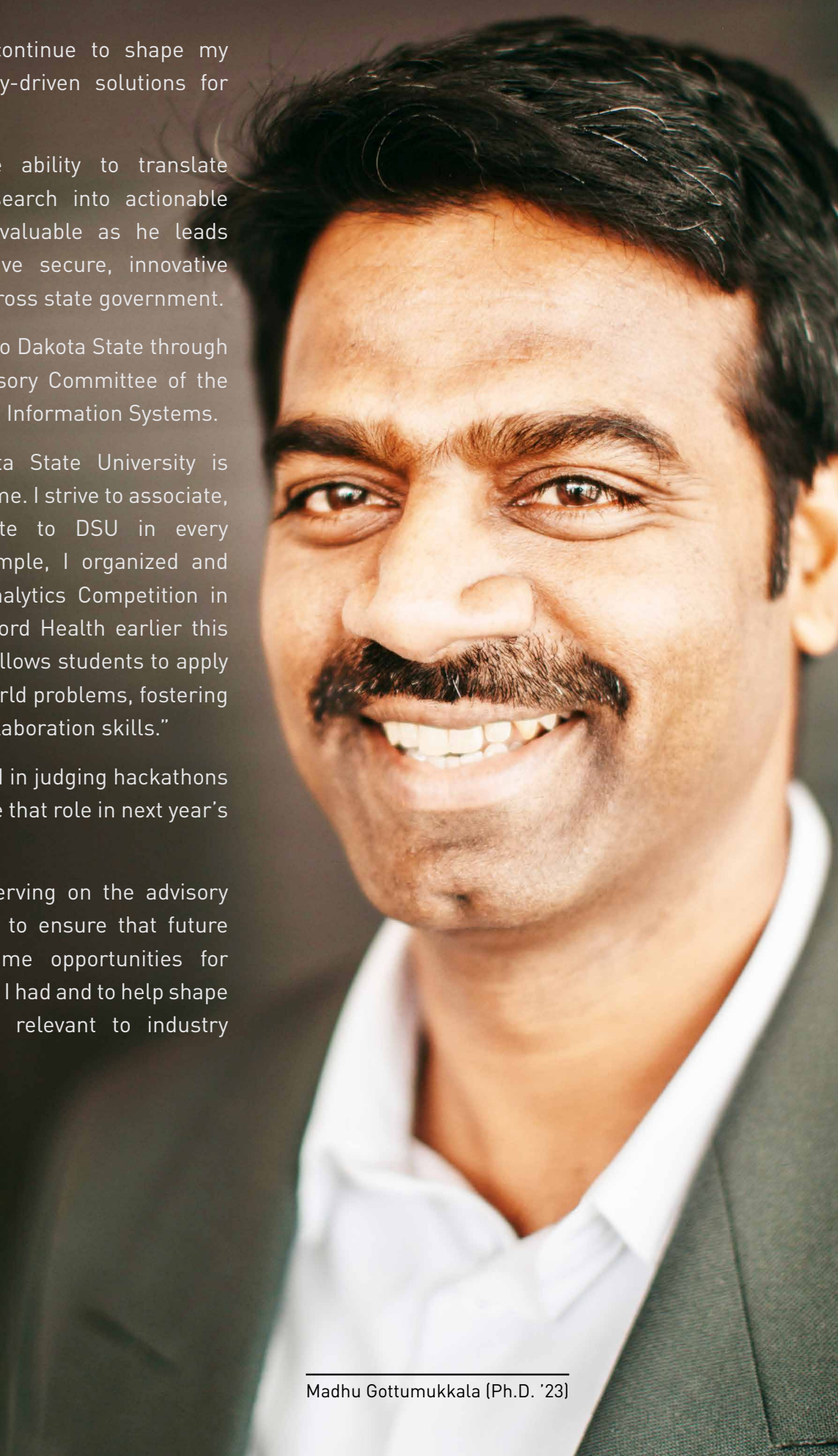
As commissioner, the ability to translate complex academic research into actionable solutions has been invaluable as he leads multiple teams to drive secure, innovative technology solutions across state government.

He remains connected to Dakota State through his work with the Advisory Committee of the College of Business and Information Systems.

“Giving back to Dakota State University is incredibly important to me. I strive to associate, partner, and contribute to DSU in every way possible. For example, I organized and conducted the Data Analytics Competition in collaboration with Sanford Health earlier this year. This competition allows students to apply data analysis to real-world problems, fostering critical thinking and collaboration skills.”

He has also participated in judging hackathons at DSU and will continue that role in next year’s competition.

Gottumukkala said, “Serving on the advisory board is a way for me to ensure that future students have the same opportunities for growth and success that I had and to help shape programs that remain relevant to industry needs.”



INNOVATION IN ACTION



Mason Blake (B.S. '02) has gone from working at startups to co-founding them.

While earning a degree in computer science, he worked part-time for a local startup called Credit Soup, now known as Bulldog Media.

"I like the small environment where you can make a big impact," Blake said.

So, a couple of years after graduating, Blake moved to Silicon Valley in 2004, where he could follow his tech entrepreneur dreams and to enjoy the live music scene in the Bay Area.

He found it intoxicating to be around the prevalent yet palpable startup culture, as the rise of Twitter and Facebook took off shortly after he arrived there.

Over the next several years, he chased his entrepreneurial dreams, utilizing the skills he developed at Dakota State. It wasn't just the technical knowledge he needed to be a

successful entrepreneur; the soft skills he learned while attending DSU were equally as important.

Those are the skills that helped Blake co-founded UpCounsel in 2012. A legal platform that has raised over \$25 million in venture capital, UpCounsel serves as a marketplace for legal services. It was eventually acquired by LinkedIn, where Blake and his co-founder worked for a couple of years leading LinkedIn's Marketplace teams.

That period was Blake's first experience working in big tech in a large corporate environment, and it didn't take long for the startup "itch" to return.

"So I left and co-founded my second company, Ratio," he said. "Ratio is a fintech platform that offers buy now, pay later services for large Software as a Service (SaaS) contracts."

Many companies are forced to pay annual contracts upfront for the use of software, and Ratio takes on the cost of the full contract value, allowing companies to have a payment plan, Blake explained.

The company is still young, small, and growing, and has raised over \$400 million in capital for lending purposes. Blake is no longer involved with the day-to-day aspect of Ratio.

"I stepped out of that role about a year ago to focus on family, health, and other ventures," he said, but remains on the board of directors.

FDIC INTERNSHIPS ARE PIPELINE TO JOBS

Dakota State students interning with the Federal Insurance Corporation (FDIC) are receiving job offers before they've even graduated.

Brady Dannenbring is one such student, who spent the summer interning with the FDIC and is currently working part-time for the organization until he graduates in May, when he will take on a full-time position.

A double major in finance and accounting, Dannenbring developed an interest in these subjects in high school by participating in the Academy of Finance program through the Sioux Falls School District. Through that program, he learned about banking, entrepreneurship, and accounting.

"I felt like that really put me ahead of the curve when I came to college, having that knowledge," he said.

Dannenbring first learned about the FDIC through Justice Forster (B.S. '24), who interned with the organization in 2023 and took a full-time role upon graduation as a financial institution specialist, a training program to become a commissioned examiner.

While interning, Dannenbring participated in different bank examinations, analyzed various

components within the bank, and checked for safety and soundness within their financial components, such as their earnings and liquidity.

His DSU education so far has been excellent preparation for the internship. "A couple of my finance classes with Professor Yenling Chang really helped me out," he said. "She teaches a financial institutions course, and I think the first few weeks of my time at the FDIC was all the things that I'd already done in her class, so that was pretty beneficial."

He found that, "Just having that experience with some of the ratio analysis put me ahead of the curve compared to some of the other interns in the program from other universities."

Dannenbring recommends everyone participate in an internship. He appreciated the ability to apply what he learned in the classroom to real-

world situations. Throughout the internship, Dannenbring had the opportunity to work on some exams with Forster.

"It was nice having a friendly face there and he taught me about securities, earnings of a bank, and more," he said.

Kalani Mangin also interned with the FDIC and was offered a full-time position upon graduating in December.



Brady Dannenbring

PARTNERSHIPS LEAD TO INTERNSHIPS

To elevate the Dakota State legacy, the university develops many partnerships with businesses, organizations, and agencies. The benefits from these collaborations impact all involved.

One way the students gain is through internships. Here are a few examples.

MARKETBEAT

Brandon Jansen's summer internship with the financial media Market Beat put class work in a different perspective. The Sioux Falls-based company was founded by Matt Paulson (B.S. '08; M.S. '09).

"Providing internships to college students is crucial because it immerses them in a supportive, real-world environment, allowing them to

experience their chosen profession and develop essential skills," said Bekah Van Maanen, MarketBeat web developer who helped develop the company's internship program.

A computer science major from Emery, S.D., Jansen spent his summer creating an in-house app for the company to make lunch orders easier.

OAK RIDGE NATIONAL LAB

Ashton Ruesch's summer internship with Oak Ridge National Laboratory helped him discover a passion for cyber research, a passion that is changing his immediate future, and potentially his career path. The summer internship at the federally funded research and development center in Tennessee has been extended to a



Brandon Jansen



RayLee Wallis behind the Department of Defense podium at her summer internship at the Pentagon.

remote internship this academic year, and he is considering changing his career goal to work at a national lab.

His advice for future interns is, “Don’t limit yourself. Even if you think you know what you want to specialize in, keep yourself open.”

SECRETARY OF THE ARMY

RayLee Wallis spent her summer as an intern in the Secretary of the Army Primary Cyber Advisor’s office.

Her role as a cybersecurity analyst intern involved reading, researching, and creating white papers, and the staff appreciated and valued the interns’ opinions and thoughts.

She also discovered that companies and the government are looking for talent in cybersecurity, so she encourages her fellow students to “just go for it” if they’re interested in an opportunity.

“Nothing is ever too big of a goal,” she said, “and taking the risk is absolutely worth it.”

CHANGING CAREERS THROUGH COLLABORATION



Tobi West (Ph.D. '23)

Tobi West's career changed with conversation.

West, a faculty member at Coastline College, spoke with the late Dr. Wayne Pauli when he visited her California college in 2017. Both schools are designated Centers of Academic Excellence (CAE) by the National Security Agency and Department of Homeland Security, but when Pauli started talking about DSU's upcoming doctoral program in cyber defense, he caught West's interest.

"I applied as soon as the next application cycle opened and started my program at DSU in 2018," she said.

Her graduate work was both rewarding and challenging, as it took effort to devote time to her studies during some parts of the academic year due to the obligations and deadlines at her job as Department Chair of Technology.

While teaching, there are many deadlines for courses, schedule preparation, reports, and other professional obligations that often cause minor delays in finishing dissertation research. But she graduated with her doctoral degree in the fall of 2023. "Completing the Ph.D. was one of my life goals and has been such a joyous highlight."

Working while in an academic program is challenging, but has advantages, West said, because of the cycle of learning. "This helps reinforce or solidify both the academic learning and the work achievements." She was able to

incorporate new research methods into her current work, find new opportunities to publish papers, and present her dissertation work at academic conferences, all of which were rewarding.

“It can be costly, from the perspective of time and money, but it is completely worth it to pursue an advanced degree.”

Another benefit was how the programs can inspire. Coastline has a program similar to DSU’s CybHER® outreach program, and she could observe the student outreach and engagement activities that CybHER uses.

“I looked for ways to do similar activities that would fit for the students at Coastline College,” West said. “This helped to inspire new ideas for middle school, high school, and community college student engagement in our CyberTech Girls program.

Dakota State continues to collaborate with other CAE institutions, said Dr. Mary Bell, dean of The Beacom College of Computer & Cyber Sciences.

“Our faculty visit other schools, we attend every CAE conference and workshop, and we have articulation agreements with other CAE schools,” she explained. “DSU also has an NSA grant that provides resources for faculty to teach other faculty at some CAE-designated schools.”

This collaboration benefits the faculty, the institutions, and the global career field.



DSU alumna Tobi West (Ph.D. '23) at a commencement event at Coastline College (Catif.)

“Being a CAE school enhances our ability to prepare graduates to excel in the workforce and lead essential research,” said Bell. “And, by fostering collaboration with government and academic partners, we can advance cybersecurity education, strengthen workforce development, and shape the future of the field.”

COMPETITION FEVER

Dakota State students have competition fever. They are dedicated to putting their skills learned in the classroom to the test, participating in competitions locally, regionally, nationally, and internationally.

This fall, students have been competing in the annual DigiKey Competition, the International Collegiate Programming Contest, and the Department of Energy's CyberForce competition. They are also finding new challenges, including the Cybersports LTD Capture the Flag (CTF) at the Cybersecurity Summit in Minneapolis. The CybHER all-women's team took first place, and other DSU teams took second, third, and fourth.

VEGAS, BABY (Photo 4)

Students also took part in competitions at DEF CON and Black Hat; both are hacker conventions held in Las Vegas in early August. Six students competed in DEF CON's DARPA Artificial Intelligence Cyber Challenge (AIxCC). This drew more than 12,500 visits and took place in an immersive venue to display the real-world stakes of software vulnerabilities, said Dr. Yong Wang, associate dean of The Beacom College. The DSU team members, supported by The Beacom College and SBS CyberSecurity, reported they had a great time attending the event and learning from others.

Several other students successfully competed in the Lockheed Martin CTF in Aerospace Village at DEF CON, some winning the Darkstar Badge. The event had 11 challenges, and the first 10 winners received a badge shaped like an airplane and could interact and "dogfight" with other badges. DSU graduate student Sophia Lewis was one of four from DSU who won the badge, and said, "Competition was tight; we completed our challenge within the first 5 minutes, and it was over in 10."

She added, "This was my first CTF outside of internal DSU challenges and it was energizing, to say the least!"

US CYBER TEAMS (Photo 1, 2 & 5)

Dakota State students and alumni continue to make a strong showing on U.S. Cyber Teams.

Four students and alumni were chosen for the Season III team: Shane Donahue, Austen King, and Gwen Vongkasemsiri were returning team members, and Gaelen Shupe was a new member. The pipeline team also expanded, with six DSU students/alumni in that group. Dr. Tyler Flaagan, assistant professor in The Beacom College, was named a senior tech mentor, and alumni Logan Stratton and Josh Klosterman were junior tech mentors.

Donahue was chosen for the competition team and took part in the European Cybersecurity Competition in Turin, Italy this fall, where

the U.S. team took second on the guest leaderboard. He also participated in the international cybersecurity competition in Santiago, Chile in October, where the U.S. team took fourth.

There are also four members of the DSU family on the Season IV team: Brayden Borges, Austen King, Gaelin Shupe, and Shane Donahue. Flaagan is again a senior tech mentor, and Josh Klosterman is a junior tech mentor.

This year, the U.S. team's sponsoring organization, Katzcy, created the first ever U.S. Cyber Women's Team to "empower women to showcase their talents, represent the United States on the world stage, and be role models for girls who dream big."

Dakota State students on the team were Gwen Vonkasemsiri and Gillian Morris. Four teams (USA, Europe, UK, and Japan) competed at the Kunoichi Cyber Games at the 2024 Code Blue Conference in November in Tokyo, Japan, where the U.S. team took second place.

FACULTY & STAFF (Photo 3)

Faculty and staff are competing and succeeding as well, proving that the old adage, "Those who can't do, teach," is not entirely accurate.

A faculty team (consisting of Andrew Kramer, Tyler Flaagan, Cody Welu, and Shawn Zwach) won the CTF competition at the 2024 Wild West Hackin' Fest in Deadwood, a competition run by MetaCTF, a cyber skills platform.

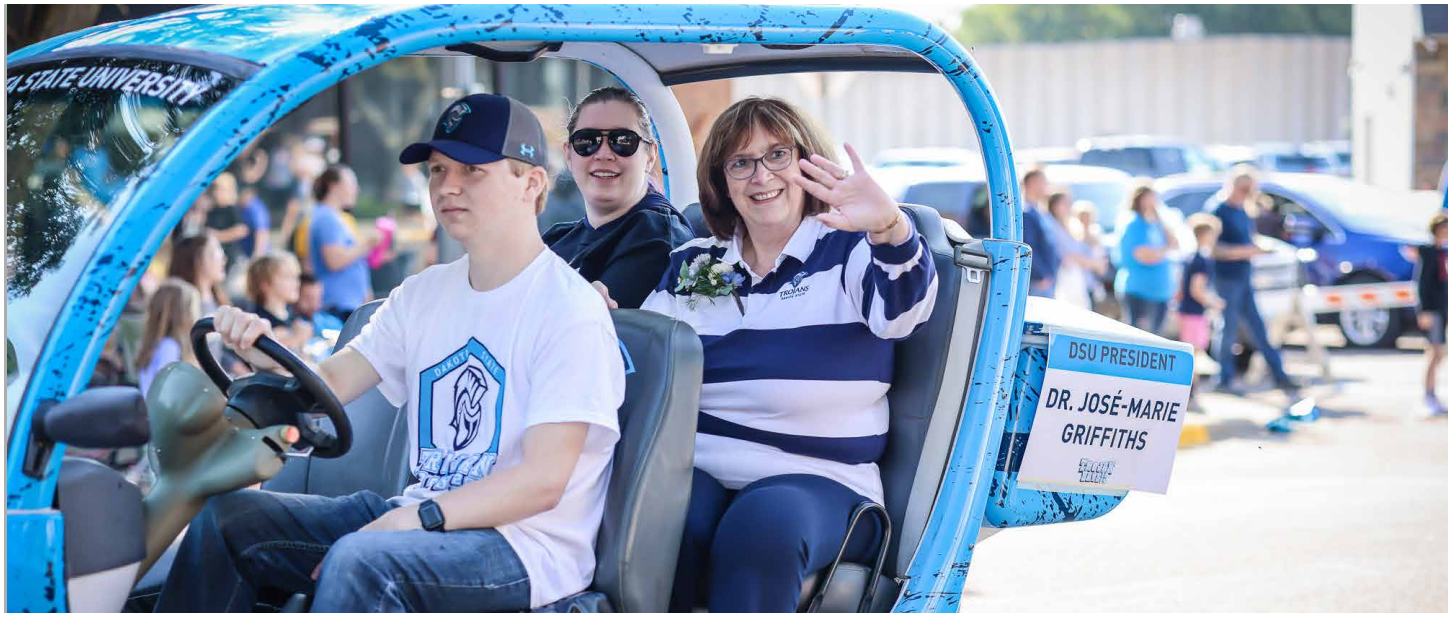


TROJAN NIGHTS & TROJAN DAYS!

From Trojan Nights to our first homecoming on Blankley Field in the Brian Kern Family Stadium in the Beacom PREMIER Complex. We had a fantastic time celebrating our legacies with you this fall.



FALL CELEBRATIONS



ENROLLMENT CONTINUES TRENDING UP



For 25 years, Dakota State has seen continued and steady enrollment increases.

Fall 2024 was no different. Enrollment headcount was up 7.6% from last year, to 3,774 students. For reference, DSU enrollment in 1999 was just over 2,000 students.

The 2024 increases were found in most enrollment categories, said Amy Crissinger, vice president for student affairs and enrollment management, including headcount, credit hours, transfer students, and international student enrollment.

Governors Cyber Academy

Another growth area is the Governors Cyber Academy. This dual-credit program is designed to give South Dakota high school juniors and seniors a jumpstart into high-demand cyber occupations.

When the program kicked off at Dakota State University in 2023, Dean Fenecia Homan expected a couple dozen students would sign up.

Actual enrollment exceeded her expectations, and by the end of year one, 89 students from 43 high schools took part. These 89 students (including some home-schooled students) completed 523 credits with a 91% cyber course

success rate. Of the 56 seniors who graduated high school in May, 57% (32 students) have enrolled at DSU for Fall 2024 as undergraduates.

These are impressive numbers for the program's first year, but Homan said, "I'm most thrilled that participation included students from across the state." Sixty-four students are enrolled in the dual credit program this fall.

Graduate program growth

Graduate numbers continue to rise. Over the last 10 years, the number of master's and doctoral students has increased from 311 in 2014, to 708 this fall. From fall 2023 to 2024 alone was a 26.9% jump.

"As technology continues to impact every facet of our world, graduate degrees are becoming an increasingly important way for working professionals to update and expand their skill sets," said Dr. Rebecca Hoey, Provost and senior vice president for academic & student affairs.

"Whether in technology fields like cybersecurity or artificial intelligence, business and information systems, or education, individuals want to be prepared for what the future will bring. Our cutting-edge, affordable, and flexible graduate degrees offer this to professionals who want to prepare themselves for the next steps in their career path," she stated.

TOTAL HEADCOUNT



3,774



Total Students
3,066 Undergraduate
708 Graduate



33,935

Total Credit Hours

GOVERNORS CYBER ACADEMY

DUAL ENROLLMENT STUDENTS



INTERNATIONAL



197

Total International Students

Students from

61

Countries
(not including the U.S.)



GRADUATE



708

Total Graduate Students



Online Only Graduate Students Growth from FA23



General Beadle Honors Program

This fall, 67 incoming freshmen joined the General Beadle Honors Program, making it the largest incoming class so far.

“It’s very gratifying to see such a large number of students want to seek out this kind of challenge and intellectualism,” said Dr. Kurt Kemper, professor and director of the General Beadle Honors Program.

Students in the program will participate in honors-only general education classes, complete senior-level research and a thesis, all while engaging in experiential learning and building a community of intellectually curious lifelong learners.

International Students

There is also a 41% increase in international students this year, to 197.



CYBER-SAVVY TEACHERS

DSU leading and guiding computer education

Cyber-savvy is a word used frequently at Dakota State. It's part of the university's operational and service missions.

It's also an important concept for the state, evident through its drive to provide K-8 computer science educational standards for students.

"One of the goals of the state is for students to be more cyber-savvy," said Dr. David De Jong, dean of the College of Education & Human Performance. "Creating K-8 standards is a good step in the right direction for South Dakota."

Dakota State has taken part in the creation of these standards, which are currently under review through the South Dakota Department of Education. Dr. Fenecia Homan, dean of the Governors Cyber Academy and K-12 Initiatives, and Dr. Mark Spanier, associate professor in The Beacom College of Computer & Cyber Sciences, took part in these planning meetings.

The Department of Education is now accepting public comment on the 19-page standards document; there will be three public meetings around the state this year. If adopted next spring, the K-8 guidelines could be implemented in the 2025-2026 school, with adoption in 2026-2027.

"This will provide a framework at different educational stages to develop foundational steps," said Homan. "The only way to make progress with [computer science education] is the intentional development of standards, and to embed the contents into existing K-8 curriculum." For grades 9-12, there are career and technical education information technology standards for individual courses, which will be up for review soon, she added.

To better prepare these teachers for this possible adoption, Dakota State has added a computer science & cyber education specialization in the Master of Science in Education Technology degree program. Courses in this specialization include cyber leadership, and classes such as AI for teachers and ethics for teachers. This specialization will give all teachers the confidence and skills to use technology in the classroom so they can enhance their students' learning. It also prepares teachers to be able to teach dual credit courses in computer science education.

De Jong said, "This specialization is what K-12 teachers need to upskill themselves and become more cyber-savvy, and supports the state's goal for students to be more cyber-savvy."



EDUCATORS RISING LEARNING EXPO

DSU leading and guiding computer education

Oct. 9 was a joyous day in the College of Education & Human Performance, as faculty members welcomed about 100 high school students and teacher leaders to campus for a day of activities to show what it means to be an educator.

“As faculty in the College of Education & Human Performance, we love working with educators,” said Jennifer Nash, expo organizer and associate professor of education.

“Hosting the Ed Rising Conference on our campus for high school students who want to be teachers is another way to uplift and encourage the profession of education.”

Attendees chose sessions where they learned how math and art intersect, how to tape athletic injuries, how to teach English language learners, and how to use artificial intelligence to be a more efficient teacher. “It was a great day of hands-on

learning and experiencing what it means to be a teacher-in-training at DSU,” Nash said.

This conference is part of the national organization Educators Rising, dedicated to “cultivating a new generation of highly skilled educators by guiding young people on a path from high school through college and into their teaching careers,” according to its website.

DSU partnered with the South Dakota chapter to give students the opportunity to come to campus and learn about becoming a teacher.

“It was fun to see our DSU instructors and faculty interact with the high school students interested in becoming teachers,” said Dean David De Jong of the College of Education & Human Performance.

“It was especially rewarding when many of these students mentioned that they would like to come to DSU to learn how to become a teacher,” said De Jong.

TEACHER APPRENTICESHIP PROGRAM EXPANDS IMPACT WITH SECOND COHORT

The South Dakota Teacher Apprenticeship Program (SD TAP) continues to help address the teacher shortage in the state after receiving funding for a second cohort. DSU added another 80 teacher apprentices in K-8 elementary education and K-12 special education in round two.

“A true apprenticeship model means you earn while you learn,” said Dr. David De Jong, dean of the College of Education & Human Performance. “So, they’re earning their degree while they’re learning, while they’re also working in a school as a paraprofessional.”

The program allows paraprofessionals (or teacher’s aides) to continue working in their classrooms while earning their teaching certificates. The goal is for them to earn their teaching degrees and be hired in teaching roles in or near their communities when they graduate.

The SD TAP is a collaborative effort with Dakota State and several South Dakota state agencies including the Board of Regents, Department of Labor and Regulation, Department of Education, Northern State University, and local school districts.

“I’m hearing from our instructors and faculty members that they love working with the teacher apprentices,” De Jong said.

That support and other resources helped the first cohort earn an average GPA of 3.6.

A celebration was held for the program’s first graduate, Kandy Flowers, in May 2024 in the rotunda at the state capitol with Governor Noem and Lieutenant Governor Rhoden. Flowers is currently teaching pre- kindergarten in Wessington Springs.

According to De Jong, approximately seven more apprentices will graduate in December and begin their teaching roles.

“The big winners are the K-12 students of South Dakota,” De Jong said. “We’re literally helping get dedicated and dynamic teachers in the hardest areas to reach in South Dakota.”

De Jong is hopeful they will be able to continue the successful apprenticeship program in the future.



Kandy Flowers teaching in her pre-K classroom in Wessington Springs.

EDUCATION AND ATHLETIC EXPERIENCE SHAPED BARRIOS INTO A LEADER

Derek Barrios's (B.S. '08) journey to becoming an educator and leader began at Dakota State.

A student-athlete, Barrios played football while earning a degree in biology for education. He chose this path because he had a passion for coaching and working with students. He also enjoyed outdoor activities, so pursuing a degree in science education allowed him to combine those interests.

"My time at Dakota State opened a lot of doors for me," he said. "My experiences on the football field with teammates and coaches, and the quality of courses and professors gave me the confidence to take on opportunities I never thought I would have."

His participation on the football field taught him how to be a leader, while his time in the classroom prepared him to be a life-long learner.

While many impacted Barrios when he was at DSU, Dr. Dale Droge, who served as his advisor, provided impactful guidance throughout his education.

"Dr. Droge had great patience with me and offered fantastic advice as I was figuring out college life and coursework," he said.

Barrios developed relationships and stays

connected with many people at DSU, both professionally and personally. He met his wife Amanda (B.S. '09) at Dakota State and they have two children, Addilyn and Kroy.

Relationship building remains important to Barrios, noting that the most fulfilling aspect of being an educator is the relationships one builds and the impact one makes.

"I don't think that people enter the education field for praise from outside people. It's the enormous impact and intrinsic gratification one gets from working with so many great students and other educators that is unmatched," he said.

"The impact we have as educators and the growth that we get to see in students every day is what makes education so special."

After serving as a teacher and coach for the first five years of his career, he took on the role as 7-12 principal in the Custer School District, later moving on to a position as superintendent and elementary school principal in the Faulkton Area School District. Then became the superintendent in the Elk Point-Jefferson School District. In 2022, he accepted the role of assistant superintendent of schools for the Watertown School District, where he remains.



Derek Barrios (B.S. '08)

DSU GRADUATE DEGREES ELEVATE CAREERS

Grad application process streamlined at DSU

There's a short answer to the question, "What's new with Dakota State's graduate programs?"

The answer is "a lot."

New degree choices and application processes may be part of the reason a growing number of professionals are taking advantage of Dakota State graduate programs.

In fall 2023 alone, graduate enrollment was up over 15%, to 558 students. During the 2023-2024 academic year, the university awarded 145 master's and 29 doctoral degrees.

"As emerging technologies change our world in every career field, a Dakota State graduate degree can bring new skills to people who want to understand what they need to know to excel in their jobs in the future," said Dr. Mark Hawkes, dean of Graduate Studies at Dakota State.

In new and established degree programs, "we teach students to tackle complex technical challenges, develop innovative responses to time-sensitive problems, and work with professionals across many fields to leverage the full capacity of computer and information technologies," Hawkes said.

NEW EMERGING TECHNOLOGY DEGREES

One new graduate program being offered fall 2024 is the Master of Science in Artificial Intelligence. This degree equips graduates with the advanced knowledge essential for excelling in the rapidly growing AI field.

Quantum computing is another state-of-the-art technology that will impact all future careers. With the new Quantum Computing for Cybersecurity graduate certificate, students can prepare to work at the intersection of quantum computing and cybersecurity by gaining experience in both offensive and defensive strategies.

Established programs such as the MBA can open career paths, improve their earnings, and provide better job security. DSU's online MBA also integrates technology, analytics, and AI to prepare individuals to lead any organization into the future. Recent changes to the MBA make it more flexible and affordable. The restructured program is now offered for 30 credits instead of 36, so it can be completed online in as little as 21 months.

Educators can improve their skills and career opportunities with one of two new specializations in the Master of Science in



Graduate degrees are high-quality, affordable, and flexible.

Education Technology program. The Computer Science & Cyber Education specialization will equip South Dakota teachers to teach dual-credit computer classes by credentialing them in secondary computer science education. The educational technology specialization will give teachers the confidence and skills to enhance their students' learning. This is particularly important preparation as the South Dakota Department of Education is in the process of creating and approving K-8 Computer Science Standards.

APPLICATION PROCESS STREAMLINED

To make all these programs more accessible, Dakota State's enrollment team has revamped the graduate application process, making it more intuitive and fluid. The Graduate Studies

Office also added a spring start term for Ph.D. programs so students have more options in taking the next steps toward pursuing their academic goals. Depending on their programs, students may start in the fall, spring, or summer terms.

These opportunities represent a university-wide focus for students to grow through graduate programs at Dakota State.

"The commitment to DSU's mission in graduate education is systemic," Hawkes said. "Our faculty provide the best of technical know-how, our administration provides resources and removes barriers, and our Board of Regents and Governor's Office clearly grasp the landscape of a technology-driven economy and support our vision of it."

For more information about DSU graduate programs, visit dsu.edu/admissions/graduate

The 2024 GenCyber Girls in CybHER® campers, mentors, and sponsors.



DSU SUMMER CAMPS: FUN LEARNING FOR EVERYONE

Summer is not a quiet time at Dakota State

In June and July, the Madison campus is full of energy from hundreds of summer campers, who come to learn all about cyber.

In 2013, DSU was the pilot site for a co-ed, high school GenCyber Camp, sponsored by the National Science Foundation and National Security Agency. The camp was created to provide awareness of college and career pathway opportunities for secondary students.

This camp, and one for middle school girls, have grown into the two largest residential

campers in the nation. About 200 students attend the week-long co-ed camp; the GenCyber Girls' in CybHER Camp, run by DSU's outreach organization CybHER®, hosts around 125 for one week. There is also a K-12 Educators Cyber Camp each summer for teachers to explore ways to incorporate technology in their classrooms.

New camps are being added to the summer roster. In 2024, a cyber espionage camp was created, a collaboration between the



Governors Cyber Academy and the cyber leadership & intelligence program. Campers participate in hands-on activities, exercises, and simulations to explore the world of national security and cyber espionage.

“The Cyber Leadership and Intelligence (CLI) major is a little non-traditional in that it mixes some computer science and cyber operations material with history, politics, and sociology,” said Dr. Kurt Kemper, history professor at DSU. “We felt the camp was a good way to get interested students to think about the intersection of technology and the social sciences while having a ton of fun.”

In 2025, a new camp will begin for middle school boys. Camp organizers have found that reaching out to students at an earlier age helps them learn important cybersecurity practices and to consider careers in technology.

“Exposure to cybersecurity in the K-8 years is critical because it helps students develop foundational skills and sparks curiosity before they reach pivotal educational and career decisions,” said Dr. Ashley Podhradsky, CybHER co-founder and vice president for research and economic development, in an article in South Dakota NewsWatch.

This motivation to reach students at a young age drives CybHER’s outreach. They hosted 45 events across the state last year, reaching over 9,800 students of all ages.

This included events with Boys & Girls Clubs near South Dakota’s tribal nations. This effort to help minimize the digital divide is sponsored by generous donations from partner AT&T.

This summer, CybHER worked with the Sioux Falls Community Learning Center to provide cyber activities to K-5 students. The center is made up of about 26 schools and all the Sioux Falls school districts.

After a pilot program with 4th grade girls and 2nd grade boys in 2023-2024, CybHER is expanding to include a free afterschool STEM (Science, Technology, Engineering, and Math) program for all K-8 students in Madison.

“By engaging students at a young age, we can develop a generation that is not only fluent in technology but also prepared to defend and innovate in an increasingly digital world,” Podhradsky said in the NewsWatch article.



DARC ELEVATES CYBER RESEARCH INTO THE LIGHT

Some acronyms and nicknames are too perfect to pass up.

Take, for instance, MadLabs®, the clever abbreviation for Madison Cyber Labs that was suggested somewhat tongue-in-cheek but turned out to be an ideal name for the research and development building at Dakota State.

It was the same for the Dakota State University Applied Research Corporation, or DARC. This non-profit start-up business manages and operates the Dakota State's Applied Research Labs (ARL). The acronym is fitting, given its purpose to support national security research with government, military, business, and industry partners.

Along with other clients, DARC will be a tenant in the Applied Research Lab expansion

building in Sioux Falls, now under construction on the northwest side of the city. The facility, a state-owned building operated by Dakota State, is expected to open in fall 2026.

DARC is a 501(c)3 research park of Dakota State University, meaning it is affiliated with but separate from the university. It was founded in 2022 on a vision of employing past, present, and future cyber experts being produced by DSU, with the support of other South Dakota-based experts and professionals. It is currently led by CEO Andrea Thompson and COO/General Counsel Stacy Kooistra.

The corporation's focus is to provide industry-leading cybersecurity expertise and services from within secure facilities at the highest levels of classification at a price point only available in the upper Midwest. As an early-stage start-up,



they are actively engaging with industry leaders to perform work in:

- » Cybersecurity
- » Software Development
- » Reverse Engineering
- » Penetration Testing
- » Malware Analysis, and
- » Workforce Development

This type of organization is more common on the east and west coasts, but there are advantages to locating technology businesses in the middle of the country, and it ties back to the talent shortage in cyber fields.

There are around 500,000 open cybersecurity positions in the nation, and some of the talented individuals who could fill these positions would like to be located in the Midwest or Northern Plains.

By providing a connection between the workforce and a facility, Thompson said, “DARC is helping solve the talent shortage in cyber fields by recruiting research engineers and partnering them with government agencies.”

She encourages companies and government agencies to take some risk and look at other geographic areas as sources for talent and companies.

“I encourage federal agencies to step out of the beltway. It does take time and planning but it’s important to look at the whole of the country for talent, and even globally.”

Thompson said, “DSU has a wealth of educational opportunities at all levels, from certifications to advanced degrees to upskilling opportunities. If agencies can broaden their recruitment mindset about developing cyber talent, that’s one of the biggest challenges, but we have the solution right here in South Dakota.”

Moving to the future, DARC and DSU will bring generational workforce and economic development improvements to the cyber industry in South Dakota, with a focus on preserving, protecting, and advancing America’s national security interests.



Shirley Blankley's donation to DSU created a legacy to honor her husband, coach George Blankley.

CONTINUE THE *legacy of changing lives*

Alumni and friends of Dakota State University can change lives and impact South Dakota and beyond by supporting the university's academic and athletics programs, without using their checking accounts or credit cards.

Mike McKelvey, vice president for Institutional Advancement and president & CEO of the DSU Foundation, said individuals can include DSU in estate plans or gifts from IRAs. A member of the Institutional Advancement team can open a conversation about these opportunities with academics or athletics by supporting student scholarships or enhancing the faculty-student experience.

While many individuals have resources beyond their checking accounts, such as appreciated assets like stocks, real estate, commodities, or an IRA for those 70.5 years or older, there are strategies to make a gift that provide a charitable tax deduction, bypass capital gains, offer life income with part of the payout being tax-free, while including the DSU Foundation in their estate plans to support DSU. McKelvey also notes that annual gifts from one's IRA are not taxed and count towards the required minimum distribution (RMD).

For example, potential donors can establish a charitable gift annuity that provides fixed life income, with part of the payout potentially being tax-free up to 75% or more. The university's

academic programs in education, cyber, AI, and quantum computing have positioned DSU as the premier small public university with a placement rate exceeding 99%.

Through consultations with their financial advisors, supporters of the Trojan's inspiring mission and bold vision can include the DSU Foundation in their estate plans and strategically explore the benefits of utilizing an IRA or appreciated assets or establishing a charitable gift annuity that provides fixed income for life (with part of the payment potentially being tax free), and a charitable income tax deduction. This philanthropy can include planning for your family and other charitable interest, such as a church, local hospital, or non-profits that enhance the community.

For more information on making an estate gift or utilizing assets such as appreciated assets like stocks, real estate, and more, or a retirement account, McKelvey at mike.mckelvey@dsu.edu or call 503-828-5705.

ALUMNI IMAGINE

If 20% of DSU's 16,000 plus alumni commit 10% of their estates to the DSU Foundation, the average commitment value equals \$100,000. This legacy could grow the endowment by \$320 million.

SUPPORT

\$359,469
Philanthropic portion



1,413
Donors

impacting 16 areas/programs



SERVE | SUPPORT | CELEBRATE

TROJANS



GIVE Back!



Thank you for helping us serve, support and celebrate our Trojan community.



SERVE



953
Volunteers

45 Projects
on and off campus



2,709
Hours

MEET THE NEW STAFF



SUBASH MAHAT

Director of Advancement Data & Operations

What year did you graduate from DSU and what degree did you earn?

I graduated in May 2024 with a master's degree in analytics.

What is your role within Institutional Advancement (IA)?

I serve as the Assistant Director of Data & Operations at the DSU Foundation. In my role, I manage the database and utilize multiple reporting platforms to generate detailed reports, supporting development officers and enhancing decision-making efficiency. I have also automated various reporting processes, improving operational workflows within the foundation.

How does it feel to work for your alma mater?

Working for DSU feels both fulfilling and inspiring. Being part of a university that values innovation and excellence aligns with my own personal and professional goals.

What's your favorite DSU memory?

One of my favorite DSU memories is being involved in community events and experiencing the strong sense of collaboration and innovation that defines the university. I've also enjoyed working on impactful projects that contribute to the institution's success. I also got an opportunity to collaborate with one of the best minds in a project that allowed me to travel outside of the states through DSU-AI Sweden partnership.

What are you looking forward to most in your new role?

I'm excited to bring data-driven decision-making to the forefront, streamlining operations, and helping the IA achieve its goals more efficiently. Working closely with the philanthropic team to support DSU's mission is something I'm passionate about.

Why should people support DSU and its students?

Supporting DSU means investing in the future of innovation and technology. The university fosters a forward-thinking community that equips students with the tools they need to excel in fields like cybersecurity and artificial intelligence. Every contribution helps shape the leaders of tomorrow.

Contact Subash at Subash.Mahat@dsu.edu.

SAVANNAH WALSDORF

Leadership Giving Officer

What year did you graduate from DSU and what degree did you earn?

May 2024 with Computer Science

What is your role within Institutional Advancement?

I am a Leadership Giving Officer, responsible for expanding the base of philanthropic partners to contribute talent, time, and treasure (annual gifts) and inspiring our current philanthropic investors to enhance their annual giving. In addition, I support the growth of sponsorships for athletics and special events.

How does it feel to work for your alma mater?

It is very exciting and fun getting to learn about their experiences and talking to them about mine.

What's your favorite DSU memory?

Being able to play the 1st and 2nd round games of the national tournament at the DSU Field House as a part of the women's basketball team.

What are you looking forward to most in your new role?

Getting to meet new people and help fundraise for the good of DSU.

Why should people support DSU and its students?

To help DSU grow and rise up to the potential we can achieve.

Contact Savannah at Savannah.Walsdorf@dsu.edu.



JOIN THE TROJAN NIGHTS' MOMENTUM TODAY!

Contribute to the Champion Scholarship Fund



ARE YOU 70.5 YEARS OR OLDER?

Ask your advisors about using your IRA so that you will not be taxed on the distribution and the distribution counts towards your RMD (Required Minimum Distribution).



DO YOU OWN PUBLICLY TRADED STOCK?

Ask your advisors about using long-term appreciated assets like publicly traded stock versus your checking account.



MAKE A GIFT AND RECEIVE LIFE INCOME

There are a variety of strategies for making a gift that will provide a charitable income tax deduction, bypass capital gains, and provide life income. One such vehicle, a Charitable Gift Annuity, even has the possibility of providing tax-free income.

Want to make a legacy commitment? Contact our staff members:

Mike McKelvey

DSU Vice President, Advancement
President CEO DSU Foundation
mike.mckelvey@dsu.edu
Cell 503-828-5705

Jill Ruhd '07

Senior Director of Philanthropy
DSU Advancement & Foundation
jill.ruhd@dsu.edu
Cell 605-270-2534

JOIN THE MOMENTUM TODAY, SUPPORT THE CHAMPION SCHOLARSHIPS!

Please Make Checks Payable To:

DSU FOUNDATION (Champion Scholarship)

Mail to: DSU Foundation 820 N Washington, Madison, SD 57042



SAVE THE DATE

DSU UNITE

Thursday, May 1, 2025 at Denny Sanford PREMIER Center Convention Center
in Sioux Falls, S.D. To learn more, email Jill.Ruhd@dsu.edu.