South Dakota State University has been designated an Innovation and Economic Prosperity University by the Association of Public and Land-grant Universities and its Commission on Innovation, Competitiveness and Economic Prosperity.

The university is being honored as one of 14 universities that work with public and private sector partners in their states and regions to support economic development through a variety of activities, including innovation and entrepreneurship, technology transfer, talent and workforce development and community development.

The university received the designation after conducting a thorough self-review with outside stakeholder input and subsequently submitting an application that went through a rigorous independent review process. With this year’s class, South Dakota State is one of 30 public universities that hold the honor.

The designation builds on its land-grant mission and ties directly to its IMPACT 2018 strategic plan goal of driving economic growth from the commercialization of research-derived innovation and new technologies, according to President David Chicoine.

“The designation provides a direct recognition by peer land-grant and public universities of the impact that the university has on the economic growth and development of South Dakota and the region and the promise investments in our university have to continue to improve the economy by creating jobs and wealth,” Chicoine said.

“This recognition validates the value of the collaborative work across the university and with our partners and the very positive effect this work has, and will continue to have, on state and regional economies.”
Artists Robert C. Jackson and Gerald Cournoyer provide a contemporary take on traditional art forms in their latest exhibits at the South Dakota Art Museum. Viewers will find playful representations of hamburgers, fruit and water balloons in Jackson’s exhibit. Cournoyer’s paintings surround viewers with bold colors and patterns drawn from Lakota cultural traditions. Their displays will be shown until Sept. 21.

Jackson’s “Without a Net” is a collection of fun and playful still-life paintings that depict food, colorful antique crates and animated balloon dogs. Jackson brilliantly creates a sense of humor and happiness in a seemingly chaotic and suspenseful environment in most of his works. Visitors can also watch a video of Jackson creating his paintings in his studio.

“He’s an entertainer, directing the theater in front of you and doing so with amazing skill. He’s an artist who gets that you need to connect to people,” said Jodi Lundgren, coordinator and curator of exhibitions at South Dakota Art Museum. “It’s exciting that he’s playing with what still-lifes can be, toying with this art form and traditional artistic hierarchies.”

Cournoyer’s works have a very contemporary look, but honor his ancestral Lakota heritage. For Cournoyer, painting is a way of reflecting on his Lakota culture past, present and future. “Walking with a Dream (Yuha Hanble Omani)” includes paintings that depict recurring symbolism.

“I have incorporated images of birds such as ravens and crows. The symbolism of the raven is particularly important; it is believed to bring the story of the future to individuals and serves as a warning to animals that prey is near,” said Cournoyer. Cultural references provide a sense of depth and meaning to his artwork.

According to Cournoyer, the repetition of song and prayer brings Lakota people closer to the supernatural beings that guide them through their lives. His use of bold, contrasting colors and repetitive patterns transmit the spiritual importance of these rhythms. Large expanses of color and form offer the viewer stimulating depths to explore. “He really understands the draw of color, pattern and form and honors his cultural traditions in a unique and individualized way,” said Lundgren.

Jackson is a largely self-taught artist who gave up an engineering career to pursue painting. Jackson lives in the Brandywine River Valley of Pennsylvania.

Cournoyer currently lives in Washington, D.C. A native of Marty, Cournoyer is a highly educated artist, having earned an A.F.A. from the Institute of American Indian Arts in Santa Fe, a B.F.A. and an M.A.I.S. from the University of South Dakota, and an M.F.A. in painting from the University of Oklahoma.

A public reception with Jackson and Cournoyer will be held Sept. 19 from 4:30 to 7 p.m. at South Dakota Art Museum.
Students

International education organization honors Foundation’s campaign celebration video

A video featuring two South Dakota State University students produced for the campaign announcement at the Foundation’s 2013 Donor Celebration has been recognized by an international education association that represents nearly 4,000 universities worldwide.

The Foundation, working with Sioux Falls-based creative services agency Henkin Schultz, featured Alex Kunz and Noah Brown, both from Sioux Falls, in a rendition of “Kind and Generous” by the 10,000 Maniacs.

The video was shown and the song performed live before an audience of 1,000 at Frost Arena. The event culminated with the announcement that the university’s campaign, It Starts with STATE: A Campaign for South Dakota State University, raised $255.7 million.

The Foundation was notified that the video was selected by the Council for the Advancement and Support of Education (CASE) as a Bronze award winner in the “short video” category. A panel of experts selected the institution’s entry among 59 entries.

This year, 629 higher education institutions, independent schools and nonprofits from around the world submitted more than 3,000 entries in 100 categories for consideration in the Circle of Excellence awards program.

Judges gave 283 bronze, silver and gold awards. Thirteen institutions received the top prize of a grand gold award.

“We believe the video was an important way to reinforce the impact that private donors made through our historic comprehensive campaign, and it was made even more special to have SDSU students showcased in the video,” said Steve Erpenbach, President and CEO of the Foundation.

“The Foundation has enjoyed a great partnership with Henkin Schultz and we take pride in being in the same category as some very large and prestigious universities,” he said.

The other universities honored include Middlebury College (Vt.), Georgetown University (D.C.), Arizona State University, Brigham Young University (Utah), The University of Queensland (Australia) and The University of Sydney (Australia).

The Council for Advancement and Support of Education is one of the largest international associations of education institutions, serving more than 3,650 universities, colleges, schools and related organizations in more than 80 countries. CASE is the leading resource for professional development, information and standards in the fields of alumni relations, communications, educational fundraising and marketing.

Governor Daugaard participates in ceremonial signing for new football stadium

South Dakota Governor Dennis Daugaard (center) signs Senate Bill 15, which authorizes construction of a new football stadium at South Dakota State University. A ceremonial signing for SB15 was held May 22. Looking on are Dana Dykhouse (left) and South Dakota State University President David L. Chicoine (right).

Dykhouse and philanthropist T. Denny Sanford announced the lead gifts for the stadium in October 2013.

Senate Bill 15, passed by the 2014 Legislature, authorizes construction of a football stadium for up to $65 million, financed by private funds and bonds paid from event operations. The new facility will be built on the site of Coughlin-Alumni Stadium over two years.
Brookings resident Bailey Hofland has become the first student from SDSU to earn a scholarship from the Materials Handling Education Foundation, which has been presenting the award since 1976.

The $5,000 national award is for the 2014-15 school year, when Hofland will be a senior.

A mechanical engineering major, Hofland has been working at 3M Brookings since the summer after her 2011 graduation from Brookings High School.

The first summer she worked on the production floor. The next summer she worked on the manufacturing floor and on the plant's dose mapper. Since then she has worked as an engineering intern helping to improve the manufacturing process.

That made her a good choice for the Material Handling Education award because the foundation's mission is to promote the study of material handling, logistics and the supply chain.

Among the award sponsors is George Prest of Charlotte, N.C., chief executive officer of Material Handling Industry of America and founder of Prest Rack in Brookings.

As an intern, Hofland has been involved in several projects to improve the work flow. Among them is the improvement of a production status board, which is an Excel spreadsheet that allows operators, supervisors and managers to track output, downtime and attainment, she said.

Hofland called it a “lean tool,” which means it is designed to identify time- and product-wasting aspects of the manufacturing process.

On the production status board, the number of boxes produced per hour are recorded and compared with the standard rate on an hourly and weekly basis, she said. Information is then shaded red or green depending on if the crew is behind or ahead of schedule, Hofland explained.

Parents also at 3M

She worked toward creating an updated board that can be used throughout the plant during her 2013 internship. This year she is continuing to make status boards for the hundreds of workstations at 3M Brookings.

Hofland first started at 3M as a result of company policy that allows children of 3M workers to get a spot on the production floor. Her father, Todd, a 1983 electrical engineering graduate, is in plant management. Her mother, Chaille, a 1990 computer science graduate, is in product service.

Hofland could graduate in May 2015, but may stay an extra semester to earn a minor in computer science.

After graduation, she would like to stay in the manufacturing field. “Working under a packaging engineer, I realized I wanted to stay in mechanical engineering.

Awards also an honor for department

She is the second mechanical engineering major from State to earn a national scholarship in as many years and the third in five years.

Todd Letcher, a member of the department of mechanical engineering faculty, noted, “We have had a strong program that has been producing excellent engineers for years. Our recently added research capabilities and success within our research programs have added another dimension to our department that is more visible outside the university.”

He said Hofland, who carries a 3.42 GPA, is a great example of a student who combines the theories of the classroom and the on-site experiences of an internship. “Bailey was a perfect candidate for this scholarship because of her excellent grades, work ethic and work experience at 3M,” said Letcher, who nominated Hofland.

He added that Hofland has agreed to be a peer mentor for mechanical engineering majors this school year.
Doctoral student receives NASA fellowship

Doctoral student Francis Dwomoh of the Geographic Information Science Center of Excellence at South Dakota State University has received a NASA Earth and Space Science Fellowship to support his research on deforestation in West Africa.

Using satellite imagery, Dwomoh will examine the effect of human encroachment, climate change and fire on the Upper Guinean forests during the last 40 years and look at how fires may impact the remaining forest fragments.

His research adviser is senior scientist and professor of natural resource management Michael Wimberly. Dwomoh, who began his doctoral work in 2012, is the 10th Geographic Information Science Center of Excellence doctoral student to receive this award. The one-year, $30,000 fellowship may be renewed for up to two additional years.

Protecting diversity hotspot

The Upper Guinean forests once covered more than 103 million acres from southern Guinea into Sierra Leone, through Liberia and southern Côte d’Ivoire, into Ghana and western Togo. The forests are home to 2,800 plant species and a diverse range of birds, reptiles, amphibians and mammals, with some only found in this region, making it what Dwomoh calls a “biodiversity hotspot.”

Rapid population growth and expansion of agriculture has fueled deforestation of more than 80 percent of the original forest cover, Dwomoh explained. His study will focus on the remaining forest sections which are concentrated in Sierra Leone, Liberia, Côte d’Ivoire and Ghana. Most of the fragments are confined to protected areas, including forest preserves, under government control.

He will use Landsat imagery to track deforestation and information from NASA tropical rainfall and fire data to analyze the impact of fires on the region. Field work will also be done in Ghana.

The results will help government agencies and conservation groups determine how best to conserve these tropical forest remnants. “It will also provide a better understanding of the risks posed to tropical forests worldwide as climatic and population pressures increase,” Wimberly said.

Changing landscape, climate

An estimated 70 percent of the world’s cocoa supply is produced in West Africa. Farmers use slash and burn techniques to clear the land to plant cocoa trees and raise staples such as the banana-like plantain and cassava, a tuber that is the third-largest source of carbohydrates in the tropics.

Climatically, the Upper Guinean forests experience the highest temperatures and the longest dry season among tropical ecosystems worldwide, Dwomoh explained. Since the 1970s, temperatures have increased and precipitation has declined. “That’s not good for agriculture either,” he said.

Historically, the area experiences two rainy seasons—the primary one from April to July when the major crops are grown, then a short dry period in August and a minor one from September to November. But, the Ghana native added, those distinctions are fading with climate change.

That increases vulnerability of the forest fragments and leads to more frequent and intense fires, explained Dwomoh, who worked as a research scientist for the Forestry Research Institute of Ghana for eight years. His research will help ascertain whether these forest fragments may reach a tipping point at which they cannot recover from forest fires. Already some sections have been reduced to grassland littered with shrubs, he noted.
Two Chinese scientists came to Brookings to learn about grasslands and wetlands management from SDSU researchers.

Professor Zhenguo Niu from the Chinese Academy of Sciences worked with professor Carol Johnston of the department of natural resource management. Johnston's research earned her recognition as a fellow of the international Society of Wetland Scientists last year and the 2009 National Wetlands Award for Science Research. Niu's six-month visit, which began in December 2013, was funded through a grant from the China Scholarship Council.

Associate professor Yuping Rong of the China Agricultural University arrived in May and will study grassland management with rangeland ecologist Lan Xu, an associate professor in the natural resource management department. Rong's yearlong residency is sponsored by the China Scholarship Council.

Making conservation a priority

In the early 90s, the Chinese government became serious about protecting its remaining wetlands and grasslands. Though China had 10 percent of all the world's wetlands, one-third of those acres have been lost in the last 30 years, explained Niu. Most of the remaining natural wetlands are in northeastern China and the Tibetan plateau.

At the Institute of Remote Sensing and Digital Earth in Beijing, Niu uses remote sensing data, including Landsat satellite imagery, to map and evaluate progress toward preserving and restoring wetlands in China. Working with the Beijing research team, Niu has mapped China's wetlands using data from 1978, 1990, 2000 and 2008.

At SDSU, Niu learned about the state and federal agencies involved in wetlands research and various mapping techniques used to document wetlands, including a visit to U.S. Geological Survey Earth Resources Observation and Science Center—EROS, where the Landsat images he uses are stored.

The South Dakota climate and landscape are much like northeastern China, Niu explained. One of the highlights of his work at SDSU was writing a chapter on China for a book on the wetlands of the world.

Restoring grasslands

China has already lost about 90 percent of its natural grasslands. Pressure on the grasslands in economically driven, Rong explained. The government-owned land is leased to the farmers. "They don't care what it looks like; they just need to raise their livestock."

In 2011, the Chinese government began subsidizing livestock producers to help reverse the damage due to overgrazing, according to Rong. The grasslands have so been depleted that the "same area that once supported five sheep can now just raise one."

Restoring grasslands requires care, so that only native species of grasses are introduced, SDSU grasslands expert Xu pointed out. In the 1930s, some species designed to combat erosion and increase forage invaded native grasslands, replacing the native species and altering the ecosystem. "What was once the solution becomes the problem," she said.

China's tropical and subtropical grasslands already have invasive species, but the drier areas, which are more like South Dakota, do not, Rong explained. She is particularly interested in Xu’s research on the bud bank of perennial grasses, which is linked with their ability to withstand adverse conditions.

Rong will also work with Jack Butler, research ecologist for the U.S. Department of Agriculture Forest Service Rocky Mountain Research Station in Rapid City.

"In both countries, the economic benefits of agricultural production often outweigh environmental considerations," Johnston said. Urbanization led to loss of arable land, and the pressure to produce food fueled more intensive farming practices, Rong explained.

However, Niu pointed out that dealing with air pollution in major cities has made "more and more people realize the environment is important to their health." As the Chinese people enjoy greater earning power, Rong noted that they are looking outdoors to rivers, streams and parks for recreation, so are beginning to see "the value of preserving natural resources."
Hansen wins student research award

Emily Hansen was recently honored with a student research award from the Society for Nutrition Education and Behavior.

She was one of four recipients honored at the 2014 SNEP Annual Conference in Milwaukee.

The Student Research Awards recognize master’s- and doctoral-level student research in nutrition education. The SNEB’s Higher Education Division reviews all applications.

Hansen becomes the third SDSU student, and second in as many years, to receive the award. Anne McCann won in 2013 while Minette (Ridenhour) Herrick won in 2009.

Hansen, who received her doctorate in philosophy in May, presented Dietary Restraint Scores Associated with Attempting to Lose Weight.

She discovered the topic when starting work on her dissertation “Eating Behaviors, Weight Satisfaction and Biological Indicators of Low-energy Availability in College Aged Females Engaging in Various Amounts of Physical Activity.” That’s when she noticed there was not much research on eating behaviors. She collected data from college students of mixed physical activity levels and eating behaviors.

After completing her dissertation, she realized she “had loads of male data that I had not used.” As a result, she decided to work with Susan Schembre, author of the “Weight Related Eating Questionnaire,” to determine associations between self-reported dietary restraint behaviors, weight satisfaction and body mass index in a sample of nearly 900 adults.

The dietary restraint behaviors surveyed were compensatory and routine. Compensatory restraint can be described as flexible control of diet. An example being when one eats a lot for lunch but then chooses less for dinner or would allow one to eat dessert after exercising. Routine restraint is rigid control of a diet. An example being when one removes all sweets or a single food group from their diet or following a very strict, low-calorie diet.

Hansen said her interest in the topic grew because she wanted to gain a better understanding of how to promote flexible control of eating behaviors, a topic that becomes more prevalent as more people wish to lose weight.

“There’s a way to eat less that’s healthier,” she said.

Hansen thanked Kendra Kattelmann and Matt Vukovich, department head for health and nutritional sciences, for their help. Kattelmann, a professor in SDSU’s Department of Health and Nutritional Sciences and the director of the didactic program in dietetics, started her reign as the society’s president at the 2014 annual conference.

Hansen initially met Vukovich while on a campus visit when searching for a graduate assistant position. She started a graduate position working with him in fall 2007.

“SDSU really is a great school with awesome faculty members who are incredible mentors,” Hansen said. “I can’t express enough gratitude to repay them for their support.”

After earning her master’s degree in May 2009, Hansen was encouraged to pursue a doctorate. In the past five years, she worked with Vukovich, Kattelmann and Bonny Specker, the endowed chair of the Ethel Austin Martin Program in Human Nutrition.

Hansen feels working with those individuals has prepared her for her upcoming role as a faculty member at Simpson College in Indianola, Iowa. She starts her first year in August.

“I’m cautiously optimistic I’ll do a good job,” Hansen said. “I know my experience at SDSU has prepared me well. Again, the mentoring I received at SDSU really laid the groundwork for me to be successful.”

In addition to her time in the classroom, Hansen plans to continue her research and possibly suggest additional items for the “Weight Related Eating Questionnaire.”
Raising a family as a student, instructor

Attending college while having one’s children attend college at the same time might seem like an impossible task. Yet, SDSU merchandising student Bonnie Junker is doing just that.

Junker, who is working toward a master’s degree in merchandising, understands the constraints of pursuing an education while raising a family.

“I do not have super strength or a brilliant mind someone could make a movie about,” Junker said. “There are honestly days I doubt myself and, like everybody else, I have circumstances that intensify the challenges with continued education.”

Junker manages to teach undergraduate courses at the university and advises the Apparel Merchandising Association student group while completing her master’s degree online.

“I don’t want to be defined by my challenges. I believe everybody has unique circumstances that impact them in some way. However, I do not allow my circumstances or doubts make the decisions for me,” Junker said. “I believe that the difference between failure and success is found in how you respond to circumstances. We do not have full control over all of the things that come our way in life, but we have control over how we choose to respond to them.”

Junker expects to complete her master’s degree in spring 2015.

Designed for professionals in a variety of fields, the merchandising program provides students with a global perspective of the interaction of cultural economic, political, social and environmental systems as they relate to the industry.

Online programs provide opportunities for students working full time

State alumna Robyn Jensen didn’t let life get in the way of pursuing her master’s degree. Despite working full time, raising a child, moving three times and supporting her family financially while her husband was a full-time chiropractic student, Jensen managed to complete her degree in family financial planning at SDSU.

“Four years went by after graduating with my bachelor’s and I always knew I wanted my master’s degree,” Jensen said, “but as I advanced within the company to more demanding positions, I never felt like I would be able to find the time to further my education.”

Like many working adults, Jensen felt the strains of life get in the way of furthering her education. However, she soon found SDSU’s online CFP Board-Registered Program.

“There was no time like the present, and I saw my small window of opportunity open to accomplish my goal of obtaining my master’s degree,” Jensen said. “No matter the sacrifices and very busy schedules, it is all possible through distance programs to continue your education and pursue your dreams.”

What is financial planning?

A relatively young profession, financial planning emerged as a unique discipline about 30 years ago. Financial planning is the process of determining how an individual can meet life goals through the proper management of his or her financial resources. A financial planner takes a big picture view of a client’s financial situation and makes financial planning recommendations based on the client’s needs in areas such as budgeting and saving, taxes, investments, insurance and retirement planning.

Particularly within the last decade, demand for financial planners has risen as individuals have had to assume more responsibility for their own retirement and other financial decisions. Not surprisingly, consumer demand for competent financial planners has led to significant growth in the numbers who hold the CFP® certification marks. Worldwide, there was a 128 percent increase in the number of CFP® professionals from 2000 to 2010.

Working as a financial planner

Recognizing financial planning’s occupational benefits, the 2001 Jobs Rated Almanac ranked financial planning as the top career choice in the country. The survey considered a number of factors while ranking hundreds of jobs and concluded that financial planners enjoy relatively low stress, have a high earning potential and enjoy a high degree of workplace autonomy. In 2011, CNN/Money Magazine reported that demand for personal financial advisers is expected to grow 30 percent between 2011 and 2021.

SDSU is one of the more than 200 colleges and universities that offer education programs registered with the CFP Board. SDSU offers both master’s and graduate certificate options online through the Great Plains Interactive Distance Education Alliance (IDEA) consortia.
Animal science graduate certificate offered online

SDSU will offer a fully online graduate certificate in animal science starting with the fall 2014 semester. The 15-credit animal science graduate certificate program is designed to provide students with courses in the major disciplinary areas of animal science. The goal of the program is to provide foundation courses across many facets of animal science, serving as a basis for further study in one of the disciplines or in a particular animal species.

“The graduate certificate allows individuals to further their education in a relatively short amount of time while continuing to work full time,” said Joe Cassady, department head of the animal science program.

The program is intended for individuals holding a bachelor’s degree in animal science or closely related field with a desire to continue their education in the animal sciences. Individuals working in the animal science industries, animal producers and students enrolled in degree programs or preparing themselves for further education would benefit.

The animal science graduate certificate is offered through AG*IDEA, a national consortium of universities offering undergraduate and graduate programs in agricultural disciplines. The collaborative, multi-institutional program expands and diversifies the educational opportunities universities can offer.

“The consortium allows students to really get the best of the best when it comes to faculty,” said Katie Grayson, SDSU Great Plains IDEA coordinator.

“Great Plains IDEA and AG*IDEA give students the best instructors in their given field and allow them to take courses taught by true experts, regardless of their institution.”

The Great Plains Interactive Distance Education Alliance (GPIDEA) is a partnership of 20 public university members providing access to the best educational opportunities by collaboratively developing and delivering high-quality, online academic programs. Through GPIDEA, SDSU offers fully online graduate and undergraduate coursework and program options in high demand professional fields, like the animal science graduate certificate.

“Having the certificate online lets students continue with their careers and gives students who are place bound the means to further their education,” Cassady said.

SDSU is among the top 3.3 percent of U.S. higher education institutions serving more than 3,000 online students. This top percentage group dominates 50 percent of total online market share.

Public health focus of joint master’s degree

A new initiative between the University of South Dakota and SDSU will lead to a master of public health degree, with a special focus on rural health issues and higher levels of training for health-care practitioners across the state.

Both universities requested authority from the South Dakota Board of Regents to grant the public health degree, but the collaborative nature of the program means each university will contribute courses, faculty, resources and expertise toward the end result, said Jack Warner, the regents’ executive director and CEO.

The board approved the new degree to be implemented starting this fall and through online delivery.

The master of public health degree is the most widely recognized professional credential for leadership and practice in public health.

However, a 2009 survey indicated only 2 percent of South Dakota’s public health workers had a graduate degree in public health. Students currently must leave the state to pursue the MPH degree. Graduates of this program will be trained in illness prevention, contemporary health promotion and data analysis.

Student interest in health-related career fields continues to grow across South Dakota.

For example, USD reports its health sciences major has grown to 400 students after just three years as an approved degree program.

“The master of public health degree is well-suited to online delivery, and with the faculty expertise of both institutions, students will have access to an exceptional education,” said Lindsay Hamlin, director of Continuing and Distance Education at SDSU.

“We are quite pleased that we are able to offer this much needed online degree.”
A growing need for family and consumer sciences education

Looking to get a job after graduation? Look no further than majoring in family consumer sciences education at South Dakota State University.

According to Deb DeBates, a professor within the department of teaching, learning and leadership, there are many job offers for each graduate, and those offers are not just in the education field.

Family and consumer sciences education is a major in the College of Education and Human Sciences’ Department of Teaching, Learning and Leadership.

Within the secondary education program, FCSE prepares students to teach middle and high school academics or related fields.

SDSU is the state’s only university in the state that offers the program as part of the land-grant mission.

“This major has a huge workforce demand and a multitude of job offerings around the country,” said DeBates. “On average, there are 5-10 job offerings nationwide for every graduate, and each state only has about 5-10 FCSE graduates each year.”

Many high schools want to offer family and consumer sciences programs, but teachers are not readily available. SDSU’s FCSE program numbers are strong compared to national averages, but not when compared to the demand for teachers and other careers related to FCSE.

“We need more students in the program in order to produce teachers for the demand,” said DeBates. “There’s a misperception that high school FACS programs are dying out, and it’s just not true. There were more than 10 openings in South Dakota for the 2014-15 school year, and students are receiving job offers even before completing the student teaching experience.”

Over the years, FACS curriculum has transformed to accommodate the changing world. In both high school and college, educators are gearing curriculum toward issues like obesity, bullying and budget balancing.

High school classes are elective and have branched from home ec-type cooking and sewing courses to communication, leadership and career development courses. The goal of each course is to prepare students to be college, career and life ready.

Although many FCSE graduates look forward to teaching in high schools, there’s a misperception that being a teacher is the only career these students can have.

“Our graduates don’t always have to go into teaching,” said DeBates. “That’s a common misconception, and many students go on to be educators for nonprofits and 4-H groups, or coordinators and trainers for banks and businesses. There’s actually a wide range of careers.”

Frankie Lux, a FCSE senior, is interning with the state 4-H office this summer. She helps prepare for the state fair and state horse show. While she mainly works in the office preparing for events, she also carries out tasks during the events such as preparing results, rearranging arenas and running errands.

“After college I want to teach in a rural school district,” said Lux, originally from the Eureka/Leola area. “But I know I have career opportunities within 4-H, like a youth program adviser. I could also become a field specialist for specific areas such as health and physical activity, nutrition, food safety, gerontology, family resource management or finance—if I were to go on to earn an advanced degree in a specific area.”

Julie Bell and DeBates keep in contact with many of the state’s high school FACS teachers through their FCCLA chapters. FCCLA (Family, Career and Community Leaders of
New leaders look to expand reach of SDWAC programs

The South Dakota World Affairs Council, a nonpartisan, nonprofit, grassroots organization that strives to educate the public on critical global issues, recently added leaders to its governing board that sets policy, programs and activities for the organization. SDWAC is based on the campus of South Dakota State University.

After election in May, Chandradhar Dwivedi, distinguished professor and head emeritus of the College of Pharmacy’s Department of Pharmaceutical Sciences, assumed duties as board chair for the next two years. Former SDSU president Peggy Miller, who initiated the world affairs organization in 2004, will serve as vice chair. Nels Granholm, immediate past chair, Gail Tidemann, treasurer, and Harriet Swedlund, secretary, complete the board’s executive committee.

Amanda Quam, international sales administration manager at Daktronics, and Toby Uecker, assistant director of residential life for living-learning initiatives at SDSU, joined the SDWAC board of directors.

Dwivedi has served on the board for six years while Miller initiated the world affairs organization in 2004 when she served as SDSU’s president.

“I would like to work with the community to expand knowledge on global affairs in order to help individuals become informed citizens,” said Dwivedi.

The nonprofit group sponsors events and programs almost monthly around the state to prompt discussion among knowledgeable speakers and citizens.

Quam hopes to increase the number of program topics and venues in order to bring in larger audiences.

“Our world is changing significantly each year,” said Quam. “The public needs to be exposed to the difficult challenges that other cultures and regions are faced with in order to become more knowledgeable and compassionate, instead of fearful about differences. SDWAC programs help expose people to world issues that encourage conversation.”

Uecker, who returned to South Dakota after living nine years in Minnesota and Ohio, plans to bring his experience in different communities and work environments to the board.

“Bridging the physical distance between South Dakota and Kazakhstan or Syria or South Africa or Brazil helps us understand the global context and viewpoints from outside the U.S.,” said Uecker.

“Programs sponsored by SDWAC provide people with a reference point on another culture or political system to make the connection between our own lived experience and the experience of global neighbors.”

The World Affairs Councils of America, based in Washington, D.C., provides resources that address world affairs, particularly with regard to topics or themes selected by its members each year to address world issues. This year’s topics include China, the U.S. and Asia; Russia/Eurasia; cybersecurity; future of education; youth, jobs and social unrest; global economic realignment; future of energy; Africa, climate change; and food and water.

Upcoming events include:
- Sept. 11 — Screening of the human trafficking film “Not My Life” in the South Dakota School of Mines and Technology’s Surbeck Center, Rapid City, TBA;
- Oct. 16 — China Town Hall webcast with former President Jimmy Carter at Daktronics, Brookings, 6 p.m.; and
- Jan 30 — Annual SDWAC Symposium, Votstarf Ballroom, University Student Union, Brookings.
Behrens named June Civil Service Employee of the Month

Betty Behrens has been named the June Civil Service Employee of the Month at South Dakota State University.

Behrens has worked for the College of Nursing’s Department of Undergraduate Nursing for four years. As the senior secretary, her duties include coordination within various aspects of the nursing department, particularly the RN Upward Mobility program for nontraditional students and the Semester Five program for traditional, on-campus students.

Behrens and Wendlyn, her husband of 39 years, have two sons and 11 grandchildren. She enjoys working at SDSU, her pets and doing crafts.

Behrens would like to thank those who nominated her for the award. “I feel very strongly that it takes a team to go forward,” she said. “I thank God first, family, friends and coworkers for the opportunity to be a part of SDSU’s team.”

In letters of support, co-workers said Behrens is a dedicated and organized employee whose patient, caring demeanor benefits the department as a whole.

All SDSU Employee of the Month selections are determined through a nomination process by the Civil Service Advisory Council. Each civil service employee of the month receives an appreciation monetary gift from the F.O. Butler Foundation.

Price named July Employee of the Month

Kevin Price has been named the July Civil Service Employee of the Month at State.

Price has been a carpenter in the facilities and services department for 34 years. He and wife, Ruth, have been married for 36 years and have two children, Mindy of Brookings and Dustin of Aberdeen, and one granddaughter Gwen.

In letters of support, co-workers said Price is a dedicated and efficient employee whose good nature and sense of humor benefit the department.

“Kevin is a very dedicated and loyal employee,” said co-worker Michael Jensen. “He is very helpful and an excellent role model for all the members of the carpentry shop. If you have a question, Kevin will have an answer, or he will find out for you. Kevin always has a positive attitude and is always willing to help in any way that he can. Kevin is the glue that holds the carpentry shop together. Because of him, all our jobs are a little easier.”

All SDSU Employee of the Month selections are determined through a nomination process by the Civil Service Advisory Council. Each civil service employee of the month receives an appreciation monetary gift from the F.O. Butler Foundation. The trustees of the foundation recognize the importance of civil service employees and take this opportunity to thank them for their exemplary service.

Fahrenwald a American Academy of Nursing Fellow

Nancy Fahrenwald, College of Nursing dean, has been selected for induction as a fellow to the American Academy of Nursing. Fahrenwald, South Dakota’s lone representative in the 168-member class, will be inducted Oct. 18 in Washington, D.C.

The academy is comprised of more than 2,200 nurse leaders in education, management, practice, policy and research. The academy fellows include hospital and government administrators, college deans and renowned scientific researchers.

Fahrenwald was chosen in recognition of her groundbreaking research related to organ donation/transplantation with Northern Plains’ American Indian populations.

“Dr. Fahrenwald epitomizes the academy’s mission in generating and disseminating knowledge to serve the public,” said Michael Relf, one of her nominators. Relf, a 1988 State graduate, is the associate dean for global and community affairs at Duke University. “Her groundbreaking research related to organ donation/transplantation with Northern Plains American Indian populations is an exemplar of community-based participatory action research. Her research has influenced clinical practice and generated evidence to revise policy.”

Selection criteria include evidence of significant contributions to nursing and health care and sponsorship by two current academy fellows. Applicants are reviewed by a panel comprised of elected and appointed fellows, and selection is based, in part, on the extent the nominee’s nursing career has influenced health policies and the health and well-being of all. New fellows will be eligible to use the credentials FAAN (fellow of the American Academy of Nursing) after their induction in October.
SDSU, School of Mines partner on new Ph.D. degrees in engineering

Collaboration between South Dakota State University and South Dakota School of Mines and Technology will lead to new doctoral degrees in civil and environmental engineering.

The South Dakota Board of Regents June 12 approved a Ph.D. degree program in civil and environmental engineering at School of Mines and a Ph.D. degree in civil engineering at SDSU. Both programs will be implemented this fall.

Regents officials say this new partnership allows for cost savings through the sharing of courses and equipment between the two universities. South Dakota is currently the only state without a Ph.D. program in civil or environmental engineering offered by its public university system. Adding these new programs will assist South Dakota in growing and keeping its own engineering workforce, said Regents President Dean M. Krogman.

Job growth in these fields is outpacing the average growth rate for all occupations. Engineering expertise in infrastructure, construction, and sustainable development is in high demand, according to officials from both universities. Civil and environmental engineers also play an important part in developing renewable energy programs.

“The key to the success of both programs is the cooperation between SDSU and the South Dakota School of Mines and Technology,” said Lew Brown, dean of the Jerome J. Lohr College of Engineering. “Neither of our institutions could have started these doctoral programs on our own at this time, but by cooperating with each other for distance-delivered graduate courses and sharing resources, we will both be successful.”

SDSU, School of Mines approved for high-tech degrees

The South Dakota Board of Regents has given its approval for a new doctoral degree in cyber security at Dakota State University, along with a plan for DSU and SDSU to jointly offer master’s degrees in analytics and data science, building on each other’s unique academic strengths.

The doctor of science degree in cyber security is only the second doctoral degree offered at Dakota State; a doctorate in information systems is already delivered there. The new program prepares students for cyber security careers in government agencies, the private sector and as higher education faculty. Campus officials say they expect many of DSU’s undergraduate and graduate students in computer science and information assurance will be interested in the new degree program, which starts this fall.

Plans for an M.S. degree in analytics at DSU and an M.S. degree in data science at SDSU were developed collaboratively to allow students at both institutions to take advantage of DSU’s strengths in information systems, computer science and information technology and SDSU’s strengths in statistics and computational science. The two programs will share the same core set of courses, regents’ officials said.

Data science and data analytics are rapidly growing sectors of the economy, with forecasts for continued job growth. South Dakota employers in the financial services sector seek graduates with this level of advanced expertise, campus officials said. Coursework for both degrees will be offered on campus and through online delivery.

SDSU to offer new doctoral degree in engineering

The South Dakota Board of Regents June 12 approved a new doctoral degree that will prepare SDSU graduates to work in renewable energy, bio-resource conversion, and natural resources fields, with precision agriculture systems, and in advanced manufacturing and quality control.

The Ph.D. degree in agricultural, biosystems and mechanical engineering will be available starting this fall on the Brookings campus.

The program addresses a growing demand for doctoral-trained engineers in energy research and development, state and federal agencies, and in academia.

The Governor’s Office of Economic Development also has identified biosciences and value-added agriculture as key industries to further develop within South Dakota.

There is already a demand for this new degree program at SDSU, university officials told the regents. The university expects to have roughly 20 students in the program by its fourth year and plans to graduate five students annually after full implementation.

“This is huge news for us,” said Lew Brown, dean of the Jerome J. Lohr College of Engineering.

“South Dakota was the only state in the country that didn’t offer a Ph.D. degree program.

“At State, we have strong colleges of engineering and agriculture.

This new program will boost our collaborative graduate research between the two colleges, and together we can better target common areas of interest such as precision agriculture.”
Alum honored with Nightingale Award

A strong drive to succeed has been part of Amanda Nenaber for as long as she can remember. That drive helped Nenaber when she transferred from Moorhead to SDSU. Armed with a desire to go into nursing and still finish college four years after graduating from Huron High School in 2002, Nenaber took summer school classes and graduated from State in 2006.

Shortly after, Nenaber started at the University of Colorado Hospital in Denver. She started with the cardiology unit and then moved to the cardiovascular intermediate care unit before working to create her current position with the heart failure program.

Along the way, she’s added degrees—a master’s in 2011 from the University of Colorado Denver|Anschutz Medical Campus, and a doctor in nursing practice in May. “I fell into cardiology,” she said. “It clicked and is an area I feel passionate about.”

Nenaber was recently honored as one of Colorado’s best nurses. She was one of six recipients of the Nightingale Award, chosen from the 41 nurses honored as Nightingale Luminaries. Those nurses represent the best of more than 60,000 registered nurses in Colorado. They are recognized for their leadership, advocacy and innovation.

“I can’t believe I have a Florence Nightingale statue with my name on it in my house,” Nenaber said. She was named one of the University of Colorado Hospital’s Magnet Nurses of the Year and was the one selected for the upcoming national competition held in October.

State graduate named inspiring professor

For as long as she can remember, Michel M. Haigh ’99 has had a drive to do something better.

Whether it’s becoming a better teacher, a better researcher or a better person, Haigh said she tries to improve every day.

That strive for success has allowed Haigh, an associate professor in Penn State’s Department of Advertising and Public Relations, to be recently named to NerdScholar’s inaugural “40 Under 40: Professors Who Inspire” listing.

“I am always thinking I could work harder to be better,” said Haigh, who left State with degrees in communication studies and ag journalism.

“I want to do something that makes someone else’s day a little better, no matter how small that might be. Every day presents an opportunity to learn a new skill, learn about a new topic and learn how to be a better person to make the world better.”

After graduating from State, Haigh received a master’s degree at Texas Tech and then worked for the Oklahoma State Cooperative Extension Service. A supervisor there suggested she pursue her doctorate. As a result, she attended the University of Oklahoma, which led her into teaching.

“My Ph.D. adviser, Michael Pfau, suggested strategic communications would be a good emphasis or specialty,” Haigh said.

“It blended my work experience with the content I would be teaching, rather than a traditional communication studies position (e.g., an interpersonal communications track or an organizational communications track).”

“When I was looking for a tenure-track position, strategic communications professors were in demand—especially if you had a Ph.D. and previous work experience,” she continued.

“I was able to study persuasion, social influence and persuasive messages in the context of public relations. I am able to teach my students how to incorporate theory, research and writing/editing/design skills for ‘real-world’ clients in the classes I teach.”

That ability to instill the fundamentals and explain the theories and research has allowed Haigh to excel, particularly in the eyes of her students.

“It’s always nice to be recognized by your peers, but it always means more when the recognition comes from the students. Sometimes it’s hard to tell if you are having an impact on a student,” she said.

“Sometimes it takes a bit of time for students to realize what skills they might have learned in your class. For example, I have received three emails this past week from students who wanted me to know they were using the skills from the public relations writing course in their internships.”

It meant a lot they reached out to thank me for preparing them for success. They felt prepared. They felt they were a step ahead of some of the other interns. It’s rare to receive this kind of feedback.

Student evaluations often note that I’m demanding, have too many assignments, etc., but in the end, it’s nice to know they feel prepared.”

Just another way to get a little better every day.

The 40 inspirational professors were nominated based on their ability to captivate and engage students in the classroom, desire to interact with students outside of class and collaborate on research projects.
Mischell looks to combine medicine and love for the outdoors

If one would turn an ankle or suffer a worse injury at one of the national parks in the next decade, one might be treated by a recent South Dakota State graduate. That's because Laura Mischell is thinking of combining her love of the outdoors and medicine.

Mischell, who graduated in May with a bachelor's degree in biology and a minor in chemistry, will attend the Edward Via College of Osteopathic Medicine this fall—a step to practicing medicine in a national park.

"I have always loved the idea of being a physician in a clinic at a national park," said Mischell, who has worked as an emergency medical technician for the past four years. "My first-ever job was as a park ranger at Mount Rushmore National Memorial and my family includes a long line of National Park Service Rangers. I know Yellowstone has a few seasonal clinics, as well as one open year-round. All of these clinics are open to the public and are staffed and equipped for most medical emergencies as well as for routine care."

A medical mission trip to Africa in August 2012 prompted Mischell to change her career plans. At the time, she was in the pre-professional health program with aspirations of becoming a physician assistant. However, that soon changed.

"That trip really put medicine and the true meaning of healing in perspective for me," she said. "I decided I wanted to be able to represent medicine to the highest level I could, as a physician."

Pursuing that true meaning of healing drew her to osteopathic medicine. According to the American Osteopathic Association, doctors of osteopathic medicine practice a "whole person" approach to health care.

Mischell, who spent the first 13 years of her life in Kentucky, will be one of three Staters attending VCOM this fall. Jacan Simon and Grant Bludorn will join her. Pre-health professional adviser Greg Heiberger said through a partnership between SDSU and VCOM, 13 students have been offered admission to attend VCOM in fall 2015.

Overall, more State students are getting accepted to professional health programs at other universities. On average in the past few years, 20 graduates will attend medical school, up to 10 more going into physician assistant programs, five to chiropractic school, up to four more to dental schools and one in optometry. Nine students will be starting at the Sanford School of Medicine this fall.

But for Mischell, it's all about VCOM.

"Osteopathic medicine's values are focused on the patient rather than the disease and I find that extremely important," she said. "I really fell in love with VCOM's mission and vision for the future of medicine."

That feeling was solidified during a visit to VCOM's Blacksburg, Virginia, campus. VCOM also has campuses in Spartanburg, South Carolina, and just received accreditation to open another in Auburn, Alabama, in 2015.

"The atmosphere during my interview was so welcoming and sincere. The staff and the students made the interview process personable and fun," Mischell said. "A huge part of why I love this school so much is the strong international and Appalachian outreach programs."

"My medical mission trips to Kenya and Haiti have confirmed that I will pursue other outreach trips to underserved areas in the U.S. and internationally," she continued. "I chose the Virginia campus because Blacksburg is 5½ hours away from where I grew up in Kentucky. I also loved the affiliation with Virginia Tech and atmosphere of the Blue Ridge Mountains around Blacksburg. I am very outdoorsy so I plan to run and hike on the trails as a stress reliever and escape."

Mischell is confident she is prepared for the upcoming classes at VCOM.

"SDSU has provided a strong educational foundation for my future," she said. "My intense involvement in the anatomy program as an intern, teaching team member and tutor as well as classes such as advanced mammalian physiology, pathophysiology and genetics are just a few examples of the excellent education that will prepare me for medical school. SDSU empowered me to strive for excellence and equipped me with the foundation necessary for success."

"I am beyond excited to start my medical school journey this fall, and I already feel like I am a part of such an incredible program that will provide me with the education for such a meaningful and rewarding career."
Less than a year ago, I wrote on the future of STEM (science, technology, engineering and math) education in South Dakota and my hope that our state is in a position to improve STEM education. Now I see a major threat to that hope—a shortage of math and science teachers. Since January, the Associated School Boards of South Dakota has posted 66 secondary math and 45 secondary science positions. To show the gap between demand and supply, South Dakota State University only graduated five people with math certification and four with science certification this academic year. In a typical year, the South Dakota Board of Regents institutions collectively produce an average of 22 math teachers and 14 science teachers. Private institutions also develop math and science teachers but we still don't have enough to fill all of the openings with highly qualified teachers. It is very clear that we have an issue—and everyone in South Dakota NEEDS to be concerned.

Mark Baron of the University of South Dakota conducted a survey of the state's superintendents in December 2013. The results revealed that the largest number of open teaching positions in the last three years were in special education/ELL, English/language arts, mathematics and science. Clearly, this issue isn't going away. Not only are there many openings, but the quality of the applicants is also decreasing. In this same survey, the superintendents said that 86.8 percent of the science and 82.1 percent of the math applicants were inadequate. Unfortunately, districts need to fill positions to cover courses. Baron's survey revealed that about 70 percent of the districts filled positions with “applicants who were less qualified than they had hoped to find.” Are you scared yet? Everyone in South Dakota needs to help address this crisis as it affects all of us in some way—it affects our children, our grandchildren, our future workforce and our state's economic development. Do I have the solution? No, but here are some places to start. What can we do to recruit students to become math and science teachers? What can we do to keep teachers in the profession?

1. Increase teachers’ salaries.
2. Elevate the respect for the teaching profession to the level that it deserves.
3. Give teachers time for planning and professional development.

I want to make it very clear that I am NOT advocating that math and science teachers get paid more than other teachers. No, I believe ALL South Dakota teachers need an increase in salary. We are consistently ranked at or near the bottom of all states in teacher pay. We can no longer afford to ignore this problem as the future of our state is at risk.

Teaching is one of the few professions where the public feels they are the experts and are willing to tell others what to do and what not to do. However, they are not the ones in the classroom every day. We need to respect those individuals who are there as professionals and trust that they know what is best for the students.

In a survey done this spring by the SDSU Institute for STEM Education Enhancement, the K-12 teachers reported that the biggest barriers to attending STEM professional development were time and money. Our teachers need to be provided proper professional development on a regular basis by their district, the state and institutions of higher education. All people in South Dakota need to realize that education is an investment rather than an expense. We need to invest NOW. If we don't, we will continue to lag behind in job creation and economic development. Most importantly, we are shortchanging our children, who are the keys to our future.

Institute for STEM Education Enhancement

Mission

The mission of the Institute for STEM Education Enhancement is to facilitate effective SDSU, P-20, an integrated education system, and community partnerships in order to enhance the quality of science and mathematics education and research, and to further the development of a robust STEM education pipeline with an emphasis on rural STEM education. ISEE will achieve its mission through the following goals:

Goal 1 (Recruitment): Support recruitment efforts that will increase the quantity and quality of P-20 STEM educators and number of students entering STEM careers;

Goal 2 (Collaboration): Promote and support collaboration among P-20 stakeholders with STEM supporting groups to enhance STEM;

Goal 3 (Educational Opportunities): Identify, provide and support STEM educational opportunities and resources for P-20 stakeholders; and

Goal 4 (Research and Grants): Promote, conduct and advance research toward the discovery, understanding, and application of best practices in STEM education, resulting in STEM grant awards. Provide support for the broader impact and outreach components of STEM grants.