DAKOTA STATE UNIVERSITY

EXERCISE SCIENCE

BS Program

Year Six Program Self Study Date 4/10/2025

Site Visit Date:
04/30/2025

External Reviewer:
Dr. Andrea Powell

Dean: Dr. David DeJong
Program Coordinator: Dr. Scott Klungseth

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Section 1: Institutional History

Mission Change

Since 1881, Dakota State University (DSU) has provided challenging academic programs in one of the best educational environments in South Dakota. In 1984, the Legislature of the State of South Dakota (South Dakota Codified Law §13-59-2.2) authorized Dakota State University with the primary purpose of providing instruction in computer management, computer information systems, business, electronic data processing, and teacher education. DSU has the authority to credential certificates, associate degrees, baccalaureate degrees, master's degrees, and doctoral degrees through formal approval by the South Dakota Board of Regents (SDBOR) and the Higher Learning Commission (HLC), DSU's institutional accreditor.

Special Focus Institution

The SDBOR has identified DSU as a "special focus" STEM University with an emphasis in computer management, computing information technologies, cybersecurity, and related undergraduate and graduate degrees. DSU's emerging research and focus on cybersecurity is propelling the workforce, economy, and student experience to protect and advance South Dakota and beyond.

Institutional Mission

DSU's operational mission is to prepare cyber-savvy graduates who are lifelong learners, problem solvers, innovators, and leaders to live lives of positive purpose and consequence.

Institutional Vision

Innovative, entrepreneurial, and resilient since 1881, DSU will continue to rise through short - and long-term success of our students and graduates, increased strength in applied research and athletics, and deep engagement with our stakeholders, in an environment infused with quality improvement.

Institutional Values

- Distinguished and effective teaching
- Integrity
- Clear communication
- Innovation
- Inclusion
- Quality

Institutional Accreditation

Dakota State University is accredited by the Higher Learning Commission (HLC), founded in 1895, and is one of several institutional accreditors in the United States. HLC accreditation indicates that DSU has the standards, processes, and assurance that it delivers quality educational experiences. DSU must meet core components within the four HLC Criteria for Accreditation. The University completes periodic reviews for reaffirmation of accreditation through HLC's Open Pathway, a ten-year cycle with an assurance review in year four and a comprehensive evaluation in year ten. The Open

Pathway also includes an improvement component, the Quality Initiative, between years four and ten, that provides DSU the opportunity to pursue improvement projects that meet institutional needs. The institution's most recent comprehensive reaffirmation visit in October 2018 resulted in a positive review without any requirement for monitoring reports. In October 2022, DSU also met all core components during its mid-cycle assurance review.

Section 2: Program History

If multiple programs, present each one separately.

- *When, how, and why the program was developed:*

  The original program was called Fitness-Wellness Management and was primarily designed to prepare students for careers in the fitness industry. In the fall of 2002, the major was renamed Exercise Science. With changing trends in the health field, demands for exercise science majors with more training in the science of exercise prompted the change to a major in Exercise Science.

- *Program alignment with DSU's institutional mission:*

  The Exercise Science major at Dakota State University (DSU) aligns well with the institution's operational mission of preparing cyber-savvy graduates who are lifelong learners, problem solvers, innovators, and leaders to live lives of positive purpose and consequence.

  Key Aspects of DSU's Institutional Mission:

  1. Cyber-Savvy Graduates: DSU emphasizes the importance of a strong understanding of cybersecurity principles, digital ethics, and online safety. Students are well-equipped to navigate the digital world securely, protect personal and professional data, and recognize cyber threats. The Exercise Science program assists in this mission by integrating digital security practices into classes and field experiences, especially as fitness and health industries actions.
  2. Innovators: DSU prides itself on being an institution that prepares students to be innovators. The Exercise Science program creates opportunities for students to combine scientific knowledge with creative problem-solving, technology, and entrepreneurial thinking. This is accomplished through hands-on research and experimentation, technology and data utilization, interdisciplinary learning, innovative training, and networking and professional development.
  3. Lifelong Learners: DSU's mission underscores preparing students to be life-long learners. Exercise Science majors are taught to be lifelong learners through a combination of foundational knowledge, hands-on experience, and critical thinking skills. This is done through and emphasis on evidence-based practice, hands-on learning and field

experiences, integration of technology and data analysis, and mentorship.

4. Problem Solvers: DSU's mission prioritizes students who possess problem-solving skills. The Exercise Science program develops problem-solving skills through a mix of coursework, hands-on experience, and critical thinking exercises. This includes applied knowledge in anatomy and physiology, utilization of case studies and real-world scenarios, lab and field experiences, internships, research, interdisciplinary learning, and communication/teamwork.

- *Results of last comprehensive program review:*

April 19, 2018
External Reviewer: Jim White, Ph.D., C.S.C.S., ACSM-CCEP, Professor & Chair, Department of Human Performance, Bemidji State University, Bemidji, MN

From the External Reviewer:

The EXSC students praised the faculty, stating they were very friendly, easy to approach and know what they are talking about. Some students chose the program based on the curriculum meeting physical therapy and occupational therapy professional degree requirements, or other allied health field requirements. The majority hoped to enter the workplace right after completing their degree. The curriculum is focused on assisting with preparing students for the CSCS exam. The classes and content were pertinent and for the most part, the professors really seemed to know the course material. The hands-on nature of the classes helped with retention of the subject matter. The small class sizes were mentioned numerous times as a strength of the program.

Summary of Reviewer Recommendations:

a. Add a minor to attract students in other majors to Exercise Science.
b. Create a more direct student recruitment interface with potential/current student athletes.
c. Develop articulation agreements/2+2 Pathways with community colleges in the region.
d. Grow student engagement, satisfaction, and foster the sense of an authentic learning experience.
e. Maintain NSCA endorsed curriculum.
f. Engage local/regional stakeholders and graduates.
g. Indicate the present and continuous actions to be taken by the college or department to address the issues raised by the review. What outcomes are anticipated as a result of these actions?

1. Continued development and refinement of a proposed minor in strength and conditioning.
2. Develop student tutors to work with students in areas such as exercise physiology, human anatomy, and other courses deemed appropriate by the academic advisors and faculty, with student input.
3. Focused recruiting in conjunction with athletic recruiting. Continue to take advantage of opportunities to go to area high schools and college fairs. Meet with potential students and parents with a unified, positive message about the program and the opportunities for a variety of jobs.
4. Encourage faculty to attend workshops provided by the Center for Teaching and Learning to increase skills in student engagement and hands-on activities.
5. Maintain NSCA endorsed curriculum through focused review and research of current practices and content.

- *Changes made to the academic program since the last review: 2018*

Reviewer Recommendation from 2018 Report	Change Made Since Recommendation
Add a Minor	The program has added a Strength and Conditioning minor. The program is working on adding a Biomechanics minor. The program is working on adding a Sports Analytics and Performance Technologies minor
Create a More Direct Student Recruitment Interface with Potential/Current Student-Athletes	Exercise Science faculty regularly meet in-person with potential students and student-athletes. This includes touring the Human Performance Lab and classrooms. Additionally, this includes touring the new athletic facilities and the areas that will be a new Biomechanics Lab and classroom spaces.
Develop Articulation Agreements/2+2 Pathways	The program has not moved towards any specific 2+2 pathway agreements with junior colleges or community colleges. However, the DSU Admissions Office does directly communicate with Exercise Science faculty to determine the best options for course transfer recommendations.

Grow Student Engagement, Satisfaction and Foster the Sense of an Authentic Learning Experience:	The previous Exercise Science Club and the previous Physical Education Club have been combined and rebranded as the Human Performance Club.
Maintain NSCA endorsed curriculum	The DSU Exercise Science program has maintained its NSCA's Education Recognition Program (ERP). The program will be applying for Council on Accreditation of Strength and Conditioning Education (CASCE) accreditation in the next year.
Engage Local/Regional Stakeholders and Graduates	The Exercise Science faculty regularly meet with the local hospital administration, local physical therapists, fitness professions and others to determine growing trends and needs. Additionally, to discuss potential practicum and internship field experiences. These meetings take place typically once per year or more.

Others changes made to the academic program:

a. In the spring of 2021, faculty proposed that EXS 395 Practicum be changed from 2 credits to 1 credit, and to add EXS 295 Practicum for one credit. (DSU's undergraduate Curriculum Committee and the Board of Regents approved these changes through formal processes.) This change did not impact the total number of credits in the major but allowed for increased structure of clinical experiences. The field experiences were scaffolded with increasing levels of tasks and best prepared students for their final internship.

b. In the Spring of 2023, faculty proposed reducing the number of 1 and 2 credit courses that were currently being offered to make the degree requirements more concise for students. This proposal did not change the number of credit hours in the major, nor did it make any changes to the common courses that are offered. EXS 145 Introduction to Exercise Science was increased to 3 credits and incorporated content from EXS 180 which was deleted from the program. Faculty believed that increasing the credit offering for EXS 395 (from 2 CR to 3 CR) while eliminating the requirement to take EXS 295 would improve the experience for students and instructors alike. (DSU's undergraduate Curriculum Committee and the Board of Regents approved these changes through formal processes.)

- *Program History Strengths:*

  a. Faculty meet one-on-one to advise Exercise Science majors.
  b. Dedicated core faculty are student centric and determined to see their students succeed.
  c. Administration supports the Exercise Science program.
  d. Faculty stay up-to-date professionally by attending regional and national conferences.
  e. Faulty have, or are pursuing, terminal degrees in appropriate fields.
  f. Students are goal oriented and dedicated; academic success is a priority to them.
  g. Students have diverse career interests.
  h. Students feel faculty are concerned with their success.
  i. Small class-size affords one-on-one time with faculty.
  j. Students have hands-on experiences.
  k. The major has an NSCA endorsed curriculum.
  l. The number of graduates has increased.

Section 3: Program Trends within the Discipline

- *International, national, regional, and state trends in the academic program:*

  Exercise science is a dynamic field that spans multiple levels, from international trends to regional and state-specific developments.

International Trends in Exercise Science:

Personalized Exercise Programs**:** Advances in technology, like wearable devices and fitness trackers, have led to a global trend towards more personalized and data-driven exercise programs. These tools enable individuals to track biometrics, monitor progress, and receive tailored fitness regimens.

Schwartz, M. L., & Murtagh, M. (2021). Personalizing exercise prescription for health and fitness. *American Journal of Lifestyle Medicine, 15*(5), 453-463.

Global Rise in Digital Fitness: The COVID-19 pandemic accelerated the growth of online fitness classes, virtual coaching, and mobile apps. Internationally, people are increasingly engaging in virtual workouts, and fitness companies are expanding their digital platforms.

Increased Focus on Mental Health and Exercise: There is a growing awareness of the psychological benefits of exercise, especially regarding its role in managing stress, anxiety, and depression. Globally, exercise is

being integrated into mental health treatment plans, and fitness programs are being designed to target emotional well-being.

Sustainability and Eco-Friendly Fitness Practices: As environmental concerns grow, sustainability trends are emerging in the fitness industry. This includes eco-friendly gym equipment, sustainable activewear, and fitness programs focused on outdoor, nature-based exercise.

Research on Exercise and Aging Populations: Many countries are focusing on aging populations and the role of exercise in preventing or managing chronic diseases, improving mobility, and enhancing quality of life for elderly individuals.

National Trends in Exercise Science (United States):

Technological Integration: The use of technology in fitness, such as virtual training, fitness apps, and wearable fitness trackers, is rapidly growing. These technologies allow for better data collection, progress tracking, and engagement with exercise.

Youth Sports and Physical Literacy: In the U.S., there's an increasing emphasis on physical literacy and early exposure to sports and exercise for children to combat rising obesity rates and promote lifelong fitness habits.

Functional Fitness and HIIT (High-Intensity Interval Training): Functional fitness programs, which focus on exercises that mimic daily movements, continue to gain popularity. Additionally, HIIT, a time-efficient workout method that alternates between short bursts of intense exercise and rest periods, remains a national trend.

Preventative Health and Exercise Medicine: As healthcare costs rise, there is growing recognition of the value of exercise as medicine. Health professionals are increasingly prescribing physical activity as a way to prevent or manage chronic conditions like heart disease, diabetes, and obesity.

Fitness Diversity and Inclusivity: The fitness industry in the U.S. is becoming more inclusive, focusing on offering fitness options for a diverse population, including different body types, ages, and abilities. There's a push for programs that cater to underserved or marginalized communities.

Regional Trends (Midwest U.S./Great Plains):

Outdoor and Nature-Based Fitness: In the Midwest, with its diverse natural landscapes, outdoor fitness activities like hiking, biking, and running are

growing in popularity. Regional parks and outdoor spaces are being utilized for fitness boot camps, yoga classes, and group fitness activities.

Wellness Integration in Workplaces: Many Midwest businesses are focusing on employee wellness programs that incorporate physical activity, such as gym memberships, on-site fitness centers, and workplace wellness challenges.

Fitness Industry Growth: Small to medium-sized cities in the Midwest are seeing growth in boutique gyms, specialized fitness studios, and wellness-focused businesses. This trend includes cycling studios, CrossFit gyms, and yoga centers, catering to niche fitness markets.

South Dakota Trends in Exercise Science:

Rural Fitness Access: South Dakota, with many rural communities, faces challenges related to access to fitness facilities. However, there has been an increase in mobile fitness programs, virtual training, and community-based wellness initiatives that help bridge this gap.

Focus on Native American Health and Wellness**:** South Dakota has a significant Native American population, and many exercise science initiatives in the state are focused on improving health and fitness within this community, addressing obesity, diabetes, and cardiovascular health through culturally appropriate programs.

Outdoor Adventure and Recreation**:** The state's natural beauty, including the Black Hills, Badlands, and many state parks, encourages outdoor activities like hiking, trail running, and biking. These activities are often promoted for both recreation and fitness.

Strengthening Community-Based Fitness Programs**:** Local initiatives, often led by universities, non-profits, or public health organizations, are encouraging fitness through community wellness programs, free fitness classes, or local races to build awareness of physical activity's importance in improving overall health.

University Research in Exercise Science: Universities are conducting cutting-edge research in exercise science, focusing on areas like sports nutrition, fitness biomechanics, and cardiovascular health. These institutions play an essential role in developing both education and research in the state.

- *How trends influence curricular and instructional decisions:*

Trends in exercise science have a significant impact on faculty's curricular and instructional decisions in the Exercise Science BS program and training for future professionals. As the field evolves, the program continues to adapt to ensure that students are prepared to meet current demands and advances in health, fitness, and wellness. Here's how some of these trends influence curriculum and instruction decisions:

Trend: The growing use of wearable fitness devices, virtual training, mobile apps, and data analysis tools has become a central element of modern fitness and health management.

Curricular Influence:

- Increased focus on data analytics: The program now includes lessons in EXS 376 on data collection, analysis, and interpretation, teaching students how to use devices like heart rate monitors, GPS trackers, and apps to monitor progress and optimize performance.
- Technological tools and fitness assessments: Students are being taught how to use technology for fitness assessments, remote coaching, and even virtual classes, making them adept at using cutting-edge tools to assess clients' needs and create personalized programs. This takes place in EXS 376, EXS 454, and PE 217.

Instructional Decisions:

- Instructors integrate the use of fitness tracking technologies and virtual coaching platforms into their teaching to ensure that students are proficient in using these tools in real-world applications. This takes place in EXS 376 and PE 217.
- Courses may involve hands-on experiences with these technologies, where students can analyze real-time data and adjust programs based on clients' biometric information. This takes place in EXS 376 and PE 217.

Trend: Personalized fitness programs, based on data and individual needs, have become a prominent trend, especially with the advancement of genetics, wearable technology, and AI-driven fitness apps.

Curricular Influence:

- Customization of exercise programs: The Exercise Science BS curriculum is incorporating more focused learning on how to assess individual fitness

levels, health risks, and preferences to create tailored exercise prescriptions. This takes place in EXS 376, PE 217, EXS 400, EXS 454.
- Artificial intelligence and biomechanics: As research into artificial intelligence and personalized fitness grows, some programs are incorporating AI and biomechanics into coursework to understand how different bodies respond to exercise and training. Takes part in EXS 454

Instructional Decisions:

- Faculty emphasize practical exercises, including case studies and simulations, where students must design personalized exercise plans based on client profiles. This takes place in PE 217, EXS 350/L, EXS 482.
- Faculty are developing opportunities for increased hands-on learning experiences where students work directly with clients to implement customized programs based on data insights. This takes place in both EXS 295 and EXS 395.

Trend: Exercise is increasingly recognized for its role in improving mental health, stress management, nutrition, and overall emotional well-being, contributing to holistic wellness programs.

Curricular Influence:

- Mind-body connection: The program incorporates courses on the psychological and emotional benefits of exercise, which include stress management, mood enhancement, and cognitive function improvement. This takes place in HLTH 370.
- Exercise nutrition: Curricula is expanding to include specific courses on the nutritional aspects of physical activity, sport, and fitness. This takes place both in HLTH 422 and EXS 252.

Instructional Decisions:

- Faculty integrate mental health aspects into the broader curriculum, encouraging future professionals to design programs that address not just physical fitness but also mental health needs. This takes place in HLTH 370 and EXS 482.
- Students are involved in projects or internships where they design programs that specifically target improving emotional well-being, stress reduction, or managing mental health conditions through physical activity. This occurs in EXS 295 and EXS 395.

Trend: The popularity of online workouts and virtual personal training has surged, especially since the COVID-19 pandemic, leading to a more digital fitness landscape.

Curricular Influence:

- Remote coaching and online fitness platforms: The program includes information and assignments focused on how to manage and lead virtual fitness sessions, use digital tools for remote coaching, and handle the unique challenges of working with clients online. This takes place in EXS 376.

Instructional Decisions:

- There is also an emphasis on teaching students how to use technology to maintain client engagement and monitor progress virtually. This takes place in EXS 376, EXS 350/L, EXS 454.

Trend: There's a growing emphasis on providing inclusive fitness programs that cater to people of all backgrounds, body types, ages, and abilities.

Curricular Influence:

- Cultural competence in fitness: Courses incorporate lessons on how to design fitness programs that are culturally appropriate and accessible for diverse populations, including people from different socioeconomic backgrounds, ethnicities, and abilities. This takes place in PE 207, PE 217, and EXS 482.
- Inclusive fitness training: Courses include teaching students how to work with clients with disabilities, as well as how to make fitness environments welcoming to all. This takes place in PE 217 and EXS 482.

Instructional Decisions:

- Faculty are focusing on inclusivity by teaching students how to adapt exercises and create welcoming environments for people of all abilities. This takes place in PE 217, EXS 452, and EXS 482.
- Fieldwork opportunities are built into the curriculum, where students have the option to work directly with diverse populations in community centers, schools, medical facilities, or adaptive fitness programs.This takes place in EXS 295 and EXS 395.

- *Any limitation relative to the trends and what is needed to address those limitations:*

Although DSU has a strong focus on cutting-edge technology and technology integrations it is a continuous challenge to stay up-to-date on the latest technologies and specifically provide opportunities for students to gain experience in the latest technologies.

- *Program Trends within the Discipline Strengths:*

The new faculty members are placing a renewed emphasis on undergraduate research which will allow greater examination of the trends in the discipline. The faculty have had significant conversations with faculty in other disciplines to build cooperative programs and experiences. This has led to a detailed program of study to complete a double major in Exercise Science and Biology and discussion with Beacom faculty on how to integrate exercise science courses and artificial intelligence.

Section 4: Program Features and Curriculum

If multiple programs, present each one separately.

- *Program's mission statement, guiding principles (if applicable):*

The mission of the Dakota State University Exercise Science department follows the mission of the American College of Sports Medicine (ACSM) and the National Strength and Conditioning Association (NSCA):

Mission Statement. Dakota State University's Exercise Science Program develops students' knowledge, skills, practical applications, and educational experiences through a variety of fields and through preparation for advanced degrees. Students will graduate prepared to move the Exercise Science industry forward through their future leadership.

Vision Statement. Dakota State University's Exercise Science Program will be a regional first-choice for students who want to be highly skilled professionals in both didactic and clinical applications using evidence-based methods, research, and pedagogy.

Core Values:

1. Advocacy for the profession.
2. Community outreach to foster healthy communities through student and professor engagement.
3. Research using current, evidence-based laboratory and fieldwork experiences, and collaboration.

4. Clinical Practice that engages students to enhance psychomotor skills, field experience, and put knowledge into practice using the most current guidelines and practices.
5. Evidence-Based Education to develop didactic and clinical experiences and knowledge and to provide a strong background for advanced education and certification.
6. Professional Development to enhance the whole student experience and prepare students for high-level careers.

- *Degrees offered within the program:*

  Bachelor of Science in Exercise Science

- *Options if applicable (specializations, tracks, minors, certificates):*

  Double major with Biology
  Health Education minor
  Physical Education minor
  Strength & Conditioning minor
  Business minor

- *Comparison of the program with other programs in the region or state:*

  DSU's Exercise Science program is designed to provide students with a strong foundation in both the science of exercise and practical, applied experience. Other programs typically offer tracks in areas like fitness, wellness, sports performance, and rehabilitation. The DSU program emphasizes the use of technology, which is unique to DSU, given the university's focus on integrating technology and data-driven approaches into various disciplines. The Exercise Science program consists of a 6-credit computer science core, a 3-credit exercise science technology dedicated course (EXS 376 - Technology Integration), and technology-infused courses such as: EXS 350/350L Exercise Physiology (3-credits), EXS 353 Kinesiology (3-credits), and EXS 454 Biomechanics (3-credits).

  DSU students are well-positioned to pursue careers in fitness, wellness technology, sports performance, or health data analytics. Given DSU's integration with tech, some graduates may also move into fields such as health informatics, digital health products, or data-driven fitness solutions.

  DSU generally has competitive tuition rates, especially for in-state students. Financial aid opportunities, including scholarships and work-study programs, are likely available.

- *Students' typical progression through the program, frequency of course offerings:*

Please see the Program of Study in the Appendices starting on Page 52.

- *Multiple locations (provide information for each location if applicable):*

  N/A

- *Accreditation standards*

  Dakota State University (DSU), located in Madison, South Dakota, is accredited by the Higher Learning Commission (HLC), which is an institutional accreditation agency recognized by the U.S. Department of Education.

  The Exercise Science program is an NSCA recognized program. The NSCA Education Recognition Program (ERP) recognizes regionally accredited academic institutions for their educational programs that have met, and continue to meet, educational guidelines recommended by the NSCA. ERP recognitions are good for three years and schools are eligible for renewal following this three-year period.

- *Program Features and Curricular Strengths:*

  The Exercise Science BS Program combines theoretical knowledge with hands-on experiences. Students spend time in the lab or local facility while practicing techniques and procedures that give them confidence, increase their skill levels, and prepare them for post-graduate careers.

  To help enrich their experience, DSU offers students access to the most advanced technologies:

  - NeuroTracker Technology
  - Dartfish® Motion Analysis Software
  - ParvoMedics® 2400 Metabolic System
  - AMTI Portable Force Platform
  - MotionMonitor Software System

  Built with success in mind

  The Exercise Science curriculum covers a wide variety of topics such as; conducting fitness assessments with peers; analyzing health behaviors, and monitoring client progress. All core courses require a grade of "C" or better.

  Want to take it to the next level?

With Exercise Science, students can continue on to graduate school. Athletic training, Chiropractic Medicine, Medicine, Physician's Assistant, Occupational Therapy, and Physical Therapy are some of the options.

With exceptional training and tools to advance student knowledge, DSU has even more to offer. DSU's specific pre-professional options, like Physical Therapy track, provides an exclusive membership to the American College of Sports Medicine. Students can attend the regional ACSM (American College of Sports Medicine) conference and create their own research initiative.

During this program, DSU encourages students to seek an internship relevant to their field and individual interest areas. These internships can be paid or unpaid.

Pursue passions with a double major

With intentionally coordinated curriculums, students can double major in Biology and Exercise Science to expand their opportunities, prepare for professional programs, and explore multiple interests. At DSU, students can fully pursue their passions and career goals.

Degree in three

Students can also fast-track their education with the option to complete the bachelor's in Exercise Science in three years. If students choose the accelerated Degree in Three plan, they will take courses as a full-time student, with 9-16 credits each semester (Fall, Spring, and Summer).

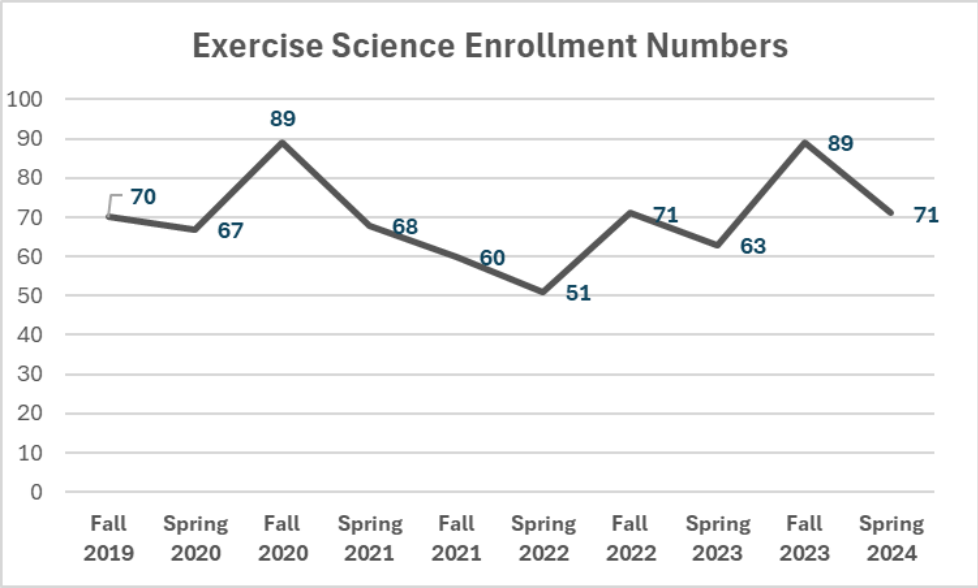
Section 5: Program Enrollment, Persistence, Retention, & Graduation

If multiple programs, present each one separately.

- *Admissions standards for the program, if appropriate. Compare/contrast admissions standards with other programs in the College:*

  The Exercise Science program does not have any admissions standards other than the admission standards to the university as a whole. Exercise Science majors are required to obtain a grade of "C" or better in all required core courses.

- *Enrollment trends (past six years) and actions taken in recent history to grow/limit enrollments:*



- *Number of degrees awarded trends (past six years):*

Semester	# of Exercise Science Degrees Conferred
FA 2018	0
SP 2019	3
FA 2019	2
SP 2020	6
FA 2020	1
SP 2021	11
FA 2021	2
SP 2022	1
FA 2022	4
SP 2023	10
FA 2023	5
SP 2024	4

- *Persistence rates (past six years):*

Semester	First-Time/Full-Time Cohort	Transfer Cohort
FA 2018 to SP2019	91%	56%
FA2019 to SP2020	77%	100%
FA2020 to SP2021	63%	67%
FA2021 to SP2022	73%	71%
FA2022 to SP2023	92%	92%
FA2023 to SP2024	89%	100%

Table 1: Persistence Rates for First-time, Full-time, Baccalaureate Degree-seeking Freshman (Fall 2018 to Fall 2023 Cohorts)

	Fall 2018 Cohort		*Fall 2019 Cohort*		*Fall 2020 Cohort*		*Fall 2021 Cohort*		*Fall 2022 Cohort*		*Fall 2023 Cohort*	
	Number of Students	*% Returned in Spring*	*Number of Students*	*% Returned in Spring*	*Number of Students*	*% Returned in Spring*	*Number of Students*	*% Returned in Spring*	*Number of Students*	*% Returned in Spring*	*Number of Students*	*% Returned in Spring*
BS in Exercise Science	23	91%	26	77%	27	63%	11	73%	25	92%	27	89%
College of Education & Human Performance	61	90%	57	82%	69	74%	36	89%	51	92%	57	86%
University	376*	86%	399	89%	355	83%	345	90%	354	90%	383*	89%

*One student passed away prior to fall 2019 term - they are removed from retention calculations. One student passed away prior to the fall 2023 term - they are removed from retention calculations

Table 2: Persistence Rates for Incoming Degree-Seeking Transfers (Fall 2018 to Fall 2023 Cohorts)

	Fall 2018 Cohort		*Fall 2019 Cohort*		*Fall 2020 Cohort*		*Fall 2021 Cohort*		*Fall 2022 Cohort*		*Fall 2023 Cohort*	
	Number of Students	*% Returned in Spring*	*Number of Students*	*% Returned in Spring*	*Number of Students*	*% Returned in Spring*	*Number of Students*	*% Returned in Spring*	*Number of Students*	*% Returned in Spring*	*Number of Students*	*% Returned in Spring*
BS in Exercise Science	9	56%	4	100%	6	67%	7	71%	12	92%	12	100%
College of Education & Human Performance	38	71%	42	79%	44	89%	40	90%	39	87%	104	89%
University	251	75%	245	78%	207	78%	183	84%	210	80%	237	89%

Persistence is defined as the number of first-time students enrolled in the fall semester who re-enrolled in the subsequent spring semester. DSU monitors persistence data for firs-time, full-time, baccalaureate degree-seeking freshmen, as well as transfers.

Number of students = all students in the starting cohort.

% Returned in Spring = the percentage of students from the cohort who registered for at least one DSU class in the subsequent spring.

- *Retention rates (past six years):*

Semester	First-Time/Full-Time Cohort	Transfer Cohort
FA 2018TO FA2019	44%	44%
FA2019 TO FA2020	58%	100%
FA 2020 TO FA2021	41%	67%
FA2021 TO FA2022	36%	43%
FA 2022 TO FA2023	68%	75%
FA2023 TO FA2024	59%	50%

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	Number of Students	*% Returned in Spring*	*Number of Students*	*% Returned in Spring*	*Number of Students*	*% Returned in Spring*	*Number of Students*	*% Returned in Spring*	*Number of Students*	*% Returned in Spring*	*Number of Students*	*% Returned in Spring*
BS in Exercise Science	9	56%	4	100%	6	67%	7	71%	12	92%	12	100%
College of Education & Human Performance	38	71%	42	79%	44	89%	40	90%	39	87%	104	89%
University	251	75%	245	78%	207	78%	183	84%	210	80%	237	89%

Persistence is defined as the number of first-time students enrolled in the fall semester who re-enrolled in the subsequent spring semester. DSU monitors persistence data for firs-time, full-time, baccalaureate degree-seeking freshmen, as well as transfers.

Number of students = all students in the starting cohort.

% Returned in Spring = the percentage of students from the cohort who registered for at least one DSU class in the subsequent spring.

- *Graduation rates (past six years):*

	4-Year	6-Year
Fall 2020 Cohort	22.22%	
Fall 2019 Cohort	19.23%	
Fall 2018 Cohort	13.04%	30.43%
Fall 2017 Cohort	11.76%	11.76%
Fall 2016 Cohort	11.11%	22.22%
Fall 2015 Cohort	14.29%	28.57%
Fall 2014 Cohort	21.43%	35.71%

Graduation Rates for First-time, Full-time, Baccalaureate Degree-seeking Freshmen (Fall 2014 to Fall 2020 Cohort)

	Fall 2014 Cohort			Fall 2015 Cohort			Fall 2016 Cohort			Fall 2017 Cohort		
	No. of Students in Cohort	*4-Year Grad Rate*	*6-Year Grad Rate*	*No. of Students in Cohort*	*4-Year Grad Rate*	*6-Year Grad Rate*	*No. of Students in Cohort*	*4-Year Grad Rate*	*6-Year Grad Rate*	*No. of Students in Cohort*	*4-Year Grad Rate*	*6-Year Grad Rate*
BS in Exercise Science	14	21.43%	35.71%	14	14.29%	28.57%	9	11.11%	22.22%	17	11.76%	11.76%
College of Education & Human Performance	56	17.86%	41.07%	57	21.05%	47.37%	45	17.78%	33.33%	61	14.75%	36.07%
University	262	29.39%	46.95%	320	28.44%	44.69%	305	30.49%	46.23%	354	35.31%	47.74%

Cont'd	Fall 2018 Cohort			Fall 2019 Cohort			Fall 2020 Cohort		
	No. of Students in Cohort	*4-Year Grad Rate*	*6-Year Grad Rate*	*No. of Students in Cohort*	*4-Year Grad Rate*	*6-Year Grad Rate*	*No. of Students in Cohort*	*4-Year Grad Rate*	*6-Year Grad Rate*
BS in Exercise Science	23	13.04%	30.43%	26	19.23%		27	22.22%	
College of Education & Human Performance	60	26.67%	50.00%	57	28.07%		69	30.43%	
University	374*	34.22%	48.93%	399	36.84%		355	37.46%	

*2 students from the Fall 2018 cohort passed away during the completion timeline, therefore are excluded from the calculation

Graduation rate measures first-time, full-time, baccalaureate degree-seeking students in the selected federal cohorts and the rate at which they graduated with a baccalaureate degree.

- *Data Trends from Annual Data Analytics Reviews and Year-Three Mid-Cycle Reviews:*
    - 3-year average Student Headcount Enrollment (Unduplicated): 63 (SDBOR productivity target: 25)
    - Total Graduates Past 5-years: 55 (SDBOR productivity target: 35)

Section 6: Faculty Credentials

- *Academic credentials for faculty who teach courses in the discipline (include vita as an appendix):*

    Current College of Education & Human Performance Faculty (Human Performance focused faculty) (Vitas in the appendix)

    Dr. Scott Klungseth, Ed.D., Undergraduate Coordinator for Exercise Science, Associate Professor of Education and Human Performance,

    Dr. Luke Chowning, Ph.D., Assistant Professor of Education and Human Performance

    Dr. Shane Scholten, Ph.D., Associate Professor of Education and Human Performance

Mrs. Stacy Anderson, MS.ED, Instructor of Education and Human Performance

Other College of Education & Human Performance Faculty (Human Performance focused faculty) who taught during the six year period but are no longer at DSU (Vitas in the appendix)

Kari Hall, Ph.D candidate, Instructor of Exercise Science

Dr. Scott Staiger, Ph.D., Associate Professor of Exercise Science

Nicole Koskovich, Doctorate of Physical Therapy, University of South Dakota

- *Academic credentials for faculty who teach support courses (include vita as an appendix):*

Faculty Who Have Taught Required Courses in the Program (2018-2024)

Steven Vassalotti, MBA, Adjunct Faculty, DSU Strength and Conditioning Coach

Anthony Drealan, M.A., Adjunct Faculty, DSU Cross-Country/Track Coach

Samantha Drealan, M.S. Adjunct Faculty

- *Summary of grant activity by faculty who teach in the program:*

Dr. Klungseth

- Faculty Research Initiative Award – Integrating Action Based Learning/Kinesthetic Classroom in Higher Education, Fall 2023
- Faculty Research Initiative Award – “Calorie Consumption, Strength Development, and Speed/Agility Development Between Fitwall HIIT Workouts and Traditional Workouts” – completed in May 2018

Dr. Chowning

- 2024 South Dakota Board of Regents Competitive Research Grant FY25 Project Title: Advancing Biomechanical Research in Exercise Science: Fostering Undergraduate

Research Initiatives and Establishing a Graduate Program Investigator: Luke Chowning Role: PI Total Award Amount: $83,695

- 2023 DSU Internal Seed Grant (Awarded) Project Title: Biomechanics research initiative Investigators: Luke Chowning Role: PI Total Award Amount: $12,127

Stacy Anderson

- Faculty Research Initiative Award – Integrating Action Based Learning/Kinesthetic Classroom in Higher Education, Fall 2023

- *Summary of faculty and/or faculty-student research linked to the program. Relate this research to faculty expertise, economic development, institutional mission, etc.:*

Dr. Klungseth

- Teaching by Day, Moonlighting by Night: Moonlighting as a Response to Low Teacher Pay. S Klungseth, K Anderson - American Journal of Educational Research, 2024

- “Teaching by Day, Moonlighting by Night”-presented at South Dakota TIE Conference, April 2024

- “Student Perceptions of Flexible Seating in the College Classroom” -presented at the Dakota State University Research Symposium, April 2024

- “Calorie Consumption, Strength Development, and Speed/Agility Development Between Fitwall HIIT Workouts and Traditional Workouts”– presented at the DSU Research Day April 2018

Dr. Chowning

- Krzyszkowski, J., Chowning, L.D., Harry, J.R. (2022). Phase-specific Verbal Cue Effects on countermovement jump performance. The Journal of Strength & Conditioning Research, 36(12): 3352- 3358.

- Harry, J.R., Krzyszkowski, J., Harris, K., Chowning, L.D., Mackey, E., Bishop, C., Barker, L.A. (2022). Momentum-based load prescriptions: Applications to Jump Squat Training. The Journal of Strength & Conditioning Research, 36(9): 2657-2662.

- Chowning, L. D., Krzyszkowski, J., & Harry, J. R. (2021). Maximalist shoes do not alter performance or joint mechanical output during the countermovement jump. Journal of Sports Sciences, 39(1), 108-114.

- Chowning, L. D., Krzyszkowski, J., Nunley, B., Lanier, R., Gonzales, I., Calamoneri, T., ... & Harry, J. R. (2021). Biomechanical Comparison of Dominant and Non-Dominant Limbs During Leap-Landings in Contemporary Style Female Dancers. Journal of Dance Medicine & Science: Official Publication of the International Association for Dance Medicine & Science.

- Harry, J. R., Barker, L. A., Tinsley, G. M., Krzyszkowski, J., Chowning, L. D., McMahon, J. J., & Lake, J. (2021). Relationships among countermovement vertical jump performance metrics, strategy variables, and inter-limb asymmetry in females. Sports Biomechanics, 1-19.

- Harry, J. R., Krzyszkowski, J., Chowning, L. D., & Kipp, K. (2021). Phase-Specific Force and Time Predictors of Standing Long Jump Distance. Journal of Applied Biomechanics, 37(5), 400-407.

- Krzyszkowski, J., Chowning, L. D., & Harry, J. R. (2020). Phase-Specific Predictors of Countermovement Jump Performance That Distinguish Good from Poor Jumpers. Journal of strength & conditioning research.

- Harry, J.R., Barker, L.A., Krzyszkowski, J., Chowning, L.D., Blinch, J. (2019). Low pass filter effects on metrics of countermovement vertical jump performance. The Journal of Strength & Conditioning Research.

Dr. Scholten

- Scholten, S.D., Montgomery, ME. Ischemic Preconditioning Effects in Competitive Swim Athletes: A Randomized Control Trial. Under review at the *Journal of Strength and Conditioning Research.*

- Barkley, S.A., Scholten, S.D. Effects of ischemic preconditioning on max effort 200-yd swim in competitive female swimmers. Under review at *International Journal of Health and Human Sciences.*

- Daum, H T., Daum, L.T., & Scholten S.D. Academic Achievement Among NCAA Division 2 Student-Athletes and Non-Athletes. *Youth;* 2024;4:1260-1270.

- Erickson, S., Pandorf, Z., Scholten, S.D. Ischemic Preconditioning on Swimming Performance: An Exploration into Practical Application. *Top Ex Sci Kines*; 2023;4(1):546-559.

- Lillquist, T., Hackney K., Scholten, S.D. The Effect of Direct and Remote Post-Exercise Ischemic Conditioning on Muscle Soreness and Strength 24 hr Following Eccentric Drop Jumps. *J Strength Cond Res*; 2023;37(9):1870-1876.

- Nelson, C.R., Brand, C.R., Chitty, M.R., Birger, C.B., Scholten, S.D. The Acute Effects of Ischemic Preconditioning on Short-Duration Cycling: A Randomized Crossover Study. *Int J Ex Sci.* 2022; 16(6):148-158.

- Lindner, T.D, Scholten, S.D., Halverson, J.M., Baumgarten, K.M., Birger, C.B., Nowotny, B.G. The acute effects of ischemic preconditioning on sprint and power performance. *SD Med*. 2021; 74(5):210-219.

- Ferley, D.D., Scholten, S.D., Vukovich M.D. Combined Sprint Interval, Plyometric, and Strength Training in Adolescent Soccer Players: Effects on Measures of Speed, Strength, Power, Change of Direction, and Anaerobic Capacity. *J Strength Cond Res*. 2020; 34(4):957-968.

- Scholten SD, Ferley DD, Birger CB, Dowling C, Mikkelson M, Springer J, Lucs N. Physical performance is not improved with vitamin D repletion: a randomized trial. *J Sports Med Phys Fitness.* 2020 Jan;60(1):85-91.

Dr. Staiger

- Staiger, S. T., & Wahl, E. T. (2018). Comparison of 3 alternative systems for measuring vertical jump height. Medicine and Science in Sports and Exercise, 50(5), S409.

- Staiger, S. T. (2018). Anthropometric measures of professional and collegiate ice hockey players.National Strength and Conditioning Association – National Conference Indianapolis, IN.

- Staiger, S. T., & Wahl, E. T. (2018). Comparison of 3 alternative systems for measuring vertical jump. American College of Sports Medicine – Annual Conference Minneapolis, MN

- *Service to community/region provided by both faculty and students enrolled in the academic program:*

Dr. Klungseth

- DSU Honors Committee – Dakota State University, August, 2024 - Present

- DSU Shared Governance Committee Member – Dakota State University, August, 2023 – Present

- DSU Student Awards Committee Member – Dakota State University
  March, 2024 – Present

- SHAPE Central District Scholar Committee – SHAPE Central District
  September 2022 - Present

- DSU Athletic Committee Member – Dakota State University
  August 2021 – Present

- DSU Student Admissions Committee Alternate Member – Dakota State University, August 2020 - Present

- Wellness Committee – Beresford School District, July 2007 – Present

- HPER Discipline Council – Dakota State University
  August 2014 – Present

- Exercise Science Search and Screen Committee – Dakota State University, June 2022 – September 2022

- Dean – College of Education Search and Screen Committee – Dakota State University, December 2021 – May 2022
- South Dakota Physical Education Content Standards Review Work Group – South Dakota Department of Education Summer, 2020
- University Diversity and Inclusion Committee – Dakota State University, Fall, 2017 – Spring, 2020
- DSU Faculty Athletic Representative (FAR) – Dakota State University
  August 2015 – Spring, 2019

Dr. Luke Chowning

- Journal Reviewer – Journal of Aging and Physical Activity (2024 – Present)
- Internal Review Board (2024 – Present)
- Curriculum Committee (2023 – Present)
- Admissions Committee (2023 – Present)
- Exercise Science Faculty Search Committee (2024)
- Co-Coordinator for the College of Education MADLAB Research Space (2023 – Present)

Dr. Scholten

- Past President for the Northland American College of Sports Medicine, 2024-2025
- President for the Northland American College of Sports Medicine, 2023-2024
- President Elect for the Northland American College of Sports Medicine, 2022-2023
- Review Editor for Frontiers, Exercise Physiology section, 2023-currently
- South Dakota BRIN mentor for undergraduate student research, 2009-current

- South Dakota Representative for the Northland American College of Sports Medicine region, 2018-2022
- Faculty Representative for Augustana's Men's Cross Country and Track Teams, 2022-2024
- Elected member of the Augustana University Co-Curriculum Council from 2015-2022 and Chair from 2018-2020.
- Elected member of the Augustana University Personnel, Tenure, and Leave Committee, 2023-2024.
- Fitness testing for various athletic teams at Augustana University, 2014-2024
- Volunteer track coach at Sioux Falls Christian High School, 2016-2021
- South Dakota National Strength and Conditioning Association Advisory Board Member, 2017 – 2023

Dr. Staiger

- South Dakota Advisory Board Member: *National Strength & Conditioning Association* 2013 – 2016
- Reviewer – *International Journal of Exercise Science* 2009 – Present
- University Code of Conduct Board (Dakota State University) 2016 – 2023
- Faculty Advisor – Soccer Club (Dakota State University) 2014 – 2023
- Research Committee (Dakota State University) 2013 – 2017
- Curriculum Committee (Dakota State University) 2012 – 2023
- Athletic Committee (Dakota State University) 2010 – 2019

- Discipline Council (Dakota State University Representative)
  2010 – 2023
- Faculty Advisor – Exercise Science Club (Dakota State University)
  2010 – 2020

Ms. Stacy Anderson

- DSU Faculty Athletic Representative (FAR)
  2020 - Present
- Board Member for SHAPE-SD
- Volunteer for Summer GenCyberAcademy
- Special Olympics Volunteer

- *Anticipated changes in staffing because of retirements, program growth, etc.:*

  The creation of an Undergraduate Coordinator for Exercise Science stipend position was new in the Spring of 2024. The position will be transitioning to a Chair of Human Performance stipend and course release position starting in the Fall of 2025 .

Section 7: Academic and Financial Support

- *Academic support provided to faculty/students:*
  - Student organization(s) directly related to the academic program, if any, and impact on student learning:

    Exercise Science Club: The Exercise Science Club at Dakota State University (DSU) is a student organization that focuses on promoting fitness, health, and wellness through activities and educational opportunities. It provides students interested in exercise science and related fields a platform to network, collaborate, and enhance their academic and professional development. The club became inactive in the 2022-2023 school year. In the spring of 2025, faculty reactivated it as the Human Performance Club.

    Some key activities may include the following:

    - Hosting guest speakers or workshops on health, fitness, and exercise science topics.

- Organizing events and activities to promote physical health and wellness.
- Opportunities for students to get involved in volunteer work, internships, and career-building activities related to exercise science.

Physical Education Club: –The Physical Education Club at Dakota State University (DSU) is typically a student organization focused on promoting physical education, fitness, and wellness activities. The club provides opportunities for students interested in physical education and related fields to network, learn, and get involved in activities that enhance physical health and well-being.The club became inactive in the 2021-2022 school year. In the spring of 2025, faculty reactivated it as the Human Performance Club.

o Library materials:
Dakota State University (DSU) library offers various resources and support that can be beneficial for students in the Exercise Science program. While specific details about Exercise Science support might not be readily available online, DSU's library typically provides the following:

1. Research Databases**:** DSU's library offers access to a range of academic databases (such as SPORTDiscus, PubMed, ScienceDirect, and other health and exercise science-related sources) that students in the Exercise Science program can use for research and assignments.
2. Academic Journals and E-books**:** The library provides access to many journals and e-books, which would be essential for Exercise Science students to stay up to date with the latest research, trends, and evidence-based practices.
3. Interlibrary Loan Services**:** If students need access to books or articles that the library does not have, DSU offers interlibrary loan services to borrow materials from other institutions.
4. Library Workshops and Research Assistance**:** The library may host workshops or one-on-one consultations with librarians who can assist with research strategies, citation management tools (like Zotero or EndNote), and navigating academic resources.
5. Study Spaces and Equipment**:** The library also provides study areas and group study rooms that may be relevant to students in Exercise Science.

The Karl E. Mundt Library and Learning Commons provides a wide range of library services as well as a diverse collection of reference and informational materials for the use of the faculty and staff of Dakota State University. The library building is regularly open six days a week, but 24-hour access to most library resources and services is available through the library's website at http://library.dsu.edu/library-homepage (or select

the “Library” under the “Academics” section of the DSU homepage). The website allows students, anywhere in the world, to search for information, request services, and learn more about the library. In cases where the library does not have access to a resource, it will provide it through interlibrary loan, at no cost to the borrower.

The Mundt Library provides a full range of services and resources related to supporting a fitness or exercise science related degree. There are abundant fitness, wellness and exercise science materials available. The library makes them easily findable through an Exercise Science Research Guide which is maintained by a librarian. The subject guide provides guidance on finding resources such as books and scholarly articles as well as information on how to research and ethically use information.

The Mundt Library has paid subscriptions to the major full-text and indexing research databases critical to pursuing a fitness or exercise science related topic including Physical Education Index, Alt-Health Watch, Web of Science, Medline (National Library of Medicine), Academic Source Premier, ProQuest Research Library, Consumer Health Complete, Health Source: Consumer Edition, Health Source: Nursing/Academic Edition, and others.

The Mundt Library has access to the major periodicals that are useful to Exercise Science research including: Physical Therapy, Physical Therapy in Sport, Physical Therapy Research, Medicine and Science in Sports and Exercise, JOPERD, New England Journal of Medicine, Science News, Journal of Nutrition, JAMA, Nutrition Reviews, Physical Educator, Perspectives in Biology and Medicine, Scientific American, Science, Nature, Scholastic Coach, American Medical News, American Scientist, Journal of Teaching in Physical Education, Mayo Clinic Proceedings, and Research Quarterly for Exercise and Sport and others. A search in Journal Finder can locate others. A simple search of the library catalog will reveal many current books and e-books using search terms like exercise, physiology, fitness, biomechanics or other related keywords. Additional publications are purchased as appropriate for the exercise science degree, following recommendations from faculty and/or advice from professionals in the field.

It is part of the mission of the Mundt Library to assist faculty in educating "information literate" students. The librarians encourage and promote ongoing instruction in research skills and are happy to provide this instruction to a class when requested to do so. The Reference Instruction Librarian and Digital Design & Access Librarian are highly skilled at collaborating with faculty to design 15 research assignments that will help accomplish course goals and provide students with a successful research experience. Library faculty are available to collaborate with classroom

faculty to design course-appropriate research projects. They train and assist students in learning and expanding their research skills working one-on-one, in small groups, or to an entire class.

- Technology infrastructure:

  DSU is known for providing high-performance computing resources, such as servers and parallel computing systems, to support complex research and simulations.

  Advanced Networking: DSU supports a robust and scalable network that ensures fast internet access for students and staff. The campus is well-equipped with high-speed Wi-Fi, Ethernet, and a reliable VPN service.

  Data Center: The university has a modern data center that houses servers, storage, and backup solutions crucial for handling the significant amount of data processed through the institution.

  DSU uses D2L (Desire2Learn) as its learning management system, which allows students and faculty to interact, manage assignments, and access educational resources online.

  The institution integrates a variety of software and tools such as Microsoft Office 365, Zoom, and others to enhance learning, communication, and collaboration.

  IT Help Desk: DSU offers comprehensive support through its IT Help Desk to assist with issues related to hardware, software, and campus network connectivity.

  Technology-enhanced Classrooms: The university's classrooms are equipped with the latest technology, including smart boards, audio-visual tools, and lecture capture systems for remote learning.

  DSU utilizes cloud-based solutions for both academic and administrative purposes, enhancing flexibility and scalability of services. Virtual labs and other cloud services are integrated into the learning experience.

  DSU is working on "smart campus" initiatives, integrating IoT (Internet of Things) technology for building management, energy efficiency, and improved student services.

- Computer hardware and software:

Information Technology Services (ITS) provides centralized hardware, software, and network support for the university. The mission of ITS is to support the integration of information technology into the academic programs and administrative offices of the University. Information technology encompasses the use of information in all of its forms: data, audio, and video. Support shall be provided in the form of guidance in the proper application of technology, user assistance and training, software development, software and hardware maintenance and support, and research of existing and expected technologies. Each faculty member is issued a Fujitsu tablet PC or MacBook Pro according to their individual preference. Devices are replaced on a cycle or as needed. Maintenance and upgrades are provided through the central Help Desk.

- Training/professional development:

  The College of Education & Human Performance holds monthly meetings to discuss any and all aspects related to a variety of topics such as curriculum, upcoming events, and administrative instructions. In addition the Human Performance faculty (Exercise Science and Physical Education) hold monthly meetings to specifically address curriculum, events, clubs, and any other topics specific to the Human Performance pillar. Faculty regularly attend local, regional, state, and/or national conferences or meetings as part of their training and professional development opportunities.

- Services provided via Office of Online Education, if appropriate:

  Online@DSU coordinates planning, planning, development and delivery of all courses and programs that are delivered at a distance, including online, videoconferencing, and face-to-face at remote sites. While the Exercise Science degree is not an online program nor delivered at another site, a number of the courses are delivered online including HLTH 320 - Community Health, HLTH 370 - Stress Management, HLTH 422 - Nutrition, and certain EXS 492 - Topics courses. Online@DSU is staffed with the Director, a State Authorization Coordinator. This team serves the needs of students who are enrolled in the online courses at DSU. Faculty and students employ Desire2Learn (D2L) for academic interaction and course delivery. D2L support is provided by Online@DSU and Information Technology Services (ITS).

- *Support staff available for faculty/College*:

The university recognizes the College of Education & Human Performance has responsibilities in areas such as admissions, field-experience

assignments, retention, advising, and certification, which extend beyond the College of Education & Human Performance. The university, therefore, funds several support staff assigned to the College of Education & Human Performance to assist with these responsibilities, including the Exercise Science program.

Shelly Rawstern, Assessment Coordinator, Department of Education and Human Performance

Tory Christenson, Administrative Assistant I, Department of Education and Human Performance

Addie Borah, Professional Academic Advisor, Department of Education and Human Performance

- *Financial support available to the program, including all revenue sources:*

The Operating & Maintenance budget for the College of Education & Human Performance is $55,000/year. This includes money for classroom materials, equipment, workshop fees, etc. The professional travel budget is $6780.00. This money is for professional travel to conferences, etc.

There is not a designated amount of funds targeted for Exercise Science/Physical Education. Funding is by a request and need basis. Traditionally, the dean has been very receptive to financial requests by the faculty as long as they are reasonable and have an educational purpose. The requested funds provide for equipment, supplies, and selected travel for faculty and students in the programs. The construction of the Beacom Complex is resulting in a new biomechanics lab facility. This includes the ongoing identification of internal and external funds for equipment and technology for the new lab. The Provost offers innovation grants, faculty research grants, and student research grants and faculty/students have funded some additional projects, at least partially, through that funds.

- *Major financial needs or concerns. Relate those needs to institutional priorities and opportunities for outside funding:*

Currently, the greatest financial need is to purchase the equipment and technology to facilitate the new Biomechanics Lab. The new Biomechanics Lab will assist in the institutional priorities of recruitment and retention.

Section 8: Facilities and Equipment

- *Facilities such as classrooms, laboratories, and other physical and/or technical facilities used to deliver the academic programs being reviewed:*

1. HUMAN PERFORMANCE LAB:

   Lab & Equipment Use - Students may use the lab and equipment if they have completed training. The lab remains locked outside of course hours and may not be freely accessed without instructor approval.

   Supervision – Students who have been properly trained in the use of the lab and equipment may utilize the lab unsupervised at the instructor's discretion.

   Research - Students who choose to do research will follow the requirements for their specific area of research. Students may choose a mentor for their research from the Exercise Science professors, or other professors from other areas of interest. Students may use the lab for their research purposes, if needed. Students doing Human Subjects testing must successfully complete CITI Training prior to beginning their research endeavors.

   Occasionally students may do lab and practical work at various sites at DSU. The DSU Strength & Conditioning policies, DSU Athletic Training Clinic policies, and Community Center policies must be followed in their respective settings. If a student violates a policy, they may be subject to a disciplinary action within those settings. This policy also includes sites that may not be normally utilized.

2. KENNEDY CENTER CLASSROOMS:

   The Kennedy Center at Dakota State University (DSU) is a key academic building that offers a variety of classrooms designed to support both traditional and modern teaching methods. While specific details about the classrooms may vary, the general features of rooms in this building reflect the university's commitment to providing an advanced and accessible learning environment.

      Technology-Enhanced Spaces: Given DSU's focus on technology and innovation, the classrooms in the Kennedy Center are equipped with state-of-the-art technology. This includes interactive whiteboards, projection systems, and networked computers to facilitate multimedia presentations and digital learning.

      Flexible Layouts: Many classrooms have flexible seating arrangements that can be reconfigured depending on the type of instruction. This could mean traditional row seating, collaborative group settings, or seminar-style configurations, allowing instructors to adapt to different teaching methods.

Collaborative Spaces: In addition to traditional classrooms, the Kennedy Center also features spaces designed for group work and collaboration. These might include small meeting rooms or areas with movable furniture, allowing students to work in teams or engage in discussions.

Comfort and Accessibility: The classrooms are designed with student comfort in mind, featuring ergonomic seating and accessible design for individuals with disabilities. This ensures that students can focus on their studies without distractions or difficulties related to the physical environment.

Aesthetics and Atmosphere: The overall atmosphere in the Kennedy Center is conducive to learning, with modern aesthetics and ample natural light in many of the spaces. This creates an inviting and energizing environment that fosters concentration and creativity.

3. COMMUNITY CENTER GYMS AND FITNESS CENTER:

The Madison South Dakota Community Center features facilities designed to support a variety of recreational activities, including gyms that cater to both fitness and sports events. Here is a general description of what students might expect from the community center's gyms:

Multi-Purpose Gymnasium: The main gym at the Madison Community Center is a versatile space, often used for basketball, volleyball, and other indoor sports. It typically features a high ceiling with wooden or synthetic flooring, designed to accommodate different types of sporting events. The space is marked with lines for basketball and volleyball courts and has adjustable hoops to meet different needs.

Fitness Area: In addition to the main gymnasium, there are separate areas within the center dedicated to fitness and weight training. These rooms are equipped with cardio machines like treadmills and stationary bikes, along with free weights, resistance machines, and other fitness equipment for general exercise and strength training.

Recreational Spaces: The community center also has smaller, specialized spaces for more casual activities such as dance classes, aerobics, or yoga. These spaces typically have smooth flooring, mirrors, and sometimes ballet bars or other equipment tailored to the activity.

Flexible Use: The design of the gym spaces allows for flexibility, accommodating everything from sports leagues to community events and fitness classes. The layout can often be adjusted

depending on the event, with partitions or curtains to create smaller sections for multiple activities happening at once.

Accessibility: The gym spaces are designed to be accessible for people with disabilities, including ramps, wide doorways, and accessible restrooms, ensuring that everyone in the community can participate in activities.

- *Additional facilities needed, if any, to improve the quality of the academic programs being reviewed (relate to the trends identified in Section 3):*

  Please see the description of the DSU Beacom Premier Complex facility on page 40.

  Vision: A biomechanics lab supports DSU's operational mission “to prepare cyber-savvy graduates who are lifelong learners, problem solvers, innovators, and leaders to live lives of positive purpose and consequence.” This will be accomplished by the vast number of learners impacted, the type of student recruited and retained, and the high level of technological literacy gained by all users.

  Utilization: The biomechanics lab will be utilized by 500+ student-athletes, 100+ students majoring in exercise science or physical education, DSU athletic trainers, instructors, faculty, etc. Student-athletes will use the biomechanics lab for baseline athletic data, injury prevention, and rehabilitation of injuries. Students majoring in exercise science and physical education will utilize the biomechanics lab for undergraduate and graduate research. Athletic trainers will have excellent equipment to help with the rehabilitation of student-athlete injuries.

  Recruitment: The biomechanics lab provides cutting-edge opportunities such as baseline testing for student-athletes from local area high schools, which would be a great recruitment tool. Another recruitment method includes marketing and disseminating the outcomes from this lab through local, regional, and professional conferences, in addition to peer-reviewed publications.

  Cutting Edge Technology: A primary feature of the lab will be the dual in-ground force platforms and the 12 Vicon cameras. With this set-up, researchers will be able to assess the movement parameters of specific joints throughout the body; thus, identifying potential injury concerns and improving the efficacy of return-to-play parameters for injured athletes. The virtual reality system, in combination with Vicon cameras and markerless motion capture, will allow for research of neuromuscular function and efficiency during varying stages of external stimuli loading, a newly emerging area of research with strong implications for return-to-play and athletic performance. This can also tie in DSU’s software and gaming development students for the creation of necessary software to facilitate research and practical usage. The

instrumented Track & Field start blocks are cutting-edge, providing novel research opportunities in addition to a practical application in Track & Field.

Programming: The technology and equipment in the biomechanics lab will be a significant component of fulfilling DSU's vision of adding graduate programming in the area of biomechanics, which is not offered at any other SDBOR Institution.

The state-of-the-art Biomechanics Lab at DSU will profoundly impact academic outcomes within the undergraduate Exercise Science program and facilitate the initiation of a specialization in Biomechanics in the MS Artificial Intelligence degree. For undergraduate and graduate students, access to cutting-edge technology such as dual in-ground force platforms, a Vicon Markerless Motion Capture System, and an Alter-G Anti-Gravity Treadmill will enhance learning through hands-on experience and advanced research opportunities. Students and faculty would be prepared to present and collaborate with peers at conferences such as the University of Nebraska at Omaha's Human Movement Variability Conference or the Northland Chapter of the American College of Sports Medicine. These experiences will enhance students' understanding of biomechanical principles and increase employability for our graduates.

The Biomechanics Lab also sets the foundation for a graduate specialization in biomechanics within the MS Artificial Intelligence degree. The comprehensive range of equipment will support advanced research projects and innovative studies, making DSU a hub for biomechanical research infused with technology. Collaborations with programs in cybersecurity, data analytics, and game development will further enrich the program, fostering interdisciplinary research and innovation. This synergy will propel DSU to the forefront of biomechanical education and research, attracting top-tier students and faculty, and producing significant scholarly contributions through peer-reviewed publications and conference presentations, which will impact South Dakota and beyond.

- *Equipment requirements for the academic program:*

  Below is a summary of the current equipment and technology request for the new Biomechanics Lab.

Equipment	Cost	Description of Equipment
Dual Belt Treadmill from AMTI, with software	$165,000	The Dual Belt Treadmill from AMTI is an instrumented treadmill equipped with two force

analysis/force plates		platforms to measure the forces of individual limbs during walking and running.
Mobile Markerless Motion Capture System	$80,000	The mobile markerless motion capture system tracks and records human movement without the need for physical markers, significantly decreasing the time required for capturing human motion.
Vicon Marker-based Motion Capture System + Installation	$78,670	This system precisely tracks and records the movements of markers placed on subjects, enabling detailed analysis of human motion for research, animation, and biomechanical studies.
BioDex Isokinetic Dynamometer Quickset System 4	$52,000	The isokinetic dynamometer is a widely used tool for measuring muscle strength in clinical intervention and rehabilitation as well as scientific research.
Boost/Alter-G Anti-Gravity Treadmill	$46,000	The anti-gravity treadmill alters an individual's biomechanics by altering the gravitational load. This treadmill is highly used for rehabilitation purposes but also can be used for research related to changes in body mass. Additionally, it would be used by athletes and clinical populations requiring lower body rehabilitation. We envision the South Dakota Space Grant as a source to fund undergraduate research using this treadmill.
Protokinetics Gait Mat	$42,510	This system allows researchers to collect and assess gait performance data in older and clinical populations, thus, expanding the scope of impact in the community.
Dual in-ground force plates and installation (permanently in the floor)	$40,150	The dual in-ground force plates and their permanent installation within the floor provide precise measurements of ground reaction forces during activities such as gait analysis, sports performance assessment, and biomechanical research.

Instrumented Track & Field Start Blocks	$30,675	Instrumented Track & Field Start Blocks provide detailed biomechanical data on sprinters' initial acceleration phases, aiding in technique refinement and performance optimization. To our knowledge, this would be the only unit in the USA allowing for novel use in research and sport.
Delysis EMG system	$27,499	The Delysis 16-channel EMG system is a medical device designed to measure and record electrical activity produced by skeletal muscles. With its 16 channels, it can simultaneously capture signals from multiple muscle groups, aiding in diagnostics and research related to neuromuscular disorders.
Strideway Gait Analysis System from Tekscan	$25,000	The Strideway Gait Analysis System from Tekscan captures dynamic pressure and foot function data during walking and running, facilitating comprehensive gait analysis for clinical assessment and research purposes.
The MotionMonitor Biofeedback Module	$23,500	This provides real-time visual and auditory feedback on movement parameters, aiding in rehabilitation, motor learning, and performance enhancement in clinical and research settings.
Virtual Reality Headset and System and The MotionMonitor License; FitLight Vision Board	$20,390	This system creates an immersive environment for rehabilitation, sports training, and cognitive enhancement, integrating real-time motion tracking and interactive visual stimuli.
AMTI AccuPower Portable Force Platform	$13,175	This platform measures ground reaction forces during dynamic movements, facilitating biomechanical analysis in various settings such as research labs, clinics, and sports performance facilities.
Visual3D License	$4,995	The Visual3D License is data analysis software specifically designed for processing and analyzing

		extracted biomechanical data, offering advanced tools for motion analysis and interpretation in research and clinical settings.
Athletic Wear to Standardize Research (weightlifting /training shoes, etc.)	$3,949	Athletic wear standardized for research, including weightlifting and training shoes, ensures consistency across study participants, reducing variability in biomechanical data collection and analysis in sports science research.

- *Quality of equipment currently being used, relative to external or professional standards, academic program changes, student usage and feedback:*

  At DSU, technology is available to all students, staff, and faculty. All of DSU's computers are fully networked. This includes network access in all of the faculty and staff offices, computing labs, residence halls, academic buildings, the Human Performance Laboratory, the DSU Memorial Fieldhouse, Beacom Complex, and the Madison Community Center.

  The Exercise Science program benefits from the use of the Human Performance Laboratory (HPL) which was founded in 2003 and is located in Room 110 of the Kennedy Center. The HPL is a focal point for students majoring in Exercise Science, providing a wide range of practical hands-on lab experiences in several EXS courses. The HPL is also used by faculty and students to support research interests through initial project development, data collection, statistical analysis, and completion of their research findings

  Testing capabilities in the Human Performance Laboratory include:

  Maximal and Submaximal Exercise Tests: Graded Exercise Tests determine the maximal aerobic capacity during exercise on either a treadmill or bicycle ergometer via gas analysis (Parvo True One System) or through predicted means via a sub-maximal effort. Students use stethoscopes, sphygmomanometers, and heart rate monitors to assess resting and exercise heart rates, and blood pressure to determine the threshold of one's physical working capacity.

  Body Composition: This test measures the percentage of body fat using skinfold calipers, tape measurements, or bioelectrical

impedance for body composition determination. Determining proper body fat percentage is an important skill for Exercise Science majors to achieve in our field.

Wingate Power Test: This assessment is perhaps the most popular test for peak anaerobic power, anaerobic fatigue and total anaerobic capacity. This test measures the relative “anaerobic” power of short-term, maximal-exertion capability via the SRM ergometer or Monark ergometer. This is extremely useful for those athletes who compete in short-term power events. 18 Muscle Strength and Endurance Tests Several tests using static, dynamic, or isokinetic evaluations of muscular fitness are available in the HPL or DSU Community Center.

Flexibility Tests: Flexibility can be easily assessed in the HPL. A variety of tests such as the sit-and-reach, shoulder elevation, and trunk extensions are performed to determine range of motion to indicate possible risk of injury from inflexibility. Also, the LIDO can assess ROM in all major joints. Other equipment such as the goniometer or inclinometer gives students the ability to measure ROM in several joints of the body.

Pulmonary Function: The HPL has the capability to measure basic lung function/vital capacity through use of the portable digital spirometer or hand-held basic spirometer.

Motion Analysis: Dartfish specializes in video analysis software, primarily used for sports, biomechanics, and other performance-related fields. Their software enables the analysis and breakdown of movements, which can be crucial for improving athletic performance, coaching, and injury prevention.

Cognitive Training: NeuroTracker is a cognitive training software designed to enhance cognitive functions like attention, memory, and perception through a series of mental exercises. The system is based on the concept of dynamic visual tracking, where users must track and respond to multiple moving targets in a 3D environment. It was developed to improve mental performance, particularly in areas such as attention, reaction time, and mental agility.

Functional Limitations and Imbalances: The Functional Movement Screen (FMS) is a system used to assess movement patterns and identify functional limitations or imbalances in individuals, particularly in relation to physical performance and injury risk. It is commonly used by fitness professionals, sports trainers, and physical therapists to evaluate an individual's movement quality and

develop a tailored exercise program to improve mobility, stability, and overall performance.

Balance, Stability, Mobility: The Y-Balance Test (YBT) is a physical assessment used to measure an individual's balance, stability, and mobility, particularly in athletes. It is a functional movement test that evaluates how well a person can maintain their balance while reaching in multiple directions. The test involves three primary directions in which the individual will reach:

Anterior (forward) reach: Reaching as far as possible in a straight line in front of the body.

Posterolateral (diagonal to the side and behind): Reaching backward and outward in a diagonal direction.

Posteromedial (diagonal to the side and in front): Reaching backward and inward in a diagonal direction.

Gait Analysis: Gait analysis utilizing Optogait involves using advanced technology to assess the way a person walks or moves. Optogait is a system designed to provide objective, precise, and quantitative measurements of human gait. It uses a combination of sensors and infrared light barriers to collect data on various aspects of movement. This technology is commonly used in clinical settings, sports science, rehabilitation, and research to understand movement patterns, diagnose abnormalities, and monitor progress in treatment or performance.

- *Additional equipment needed, if any, to improve the quality of the academic programs being reviewed (relate to trends identified in Section 3):*

  Please see the list of requested equipment and technology for the new Biomechanics Lab listed on pages 35-36

- *Plans currently underway to improve either facilities or equipment, if appropriate:*

  DSU BEACOM PREMIER COMPLEX

  The Beacom Premier Complex at Dakota State University (DSU) is a modern and state-of-the-art facility designed to support the university's academic and athletic programs, particularly in the areas of business, human performance, technology, and sports. The facility partially opened in August 2024 with final completion estimated for Spring 2025. It is anticipated that courses and research in the Exercise Science program

will partially begin use of the facility in Spring 2025 with full use of the facility in the Fall 2025. Here's an overview of the key features of the Beacom Premier Complex:

Academic and Technology Facilities

Classrooms and Learning Spaces: The Beacom Premier Complex houses innovative classrooms equipped with the latest technology. These spaces are designed to support DSU's strong focus on technology, human performance, and business education, with interactive whiteboards, multimedia projectors, and networked computer stations that facilitate interactive learning.

Collaboration Areas: Many areas within the complex are designed to foster collaboration and group work, featuring flexible seating arrangements, lounges, and open spaces where students and faculty can engage in discussions or work together on projects.

Biomechanics Lab:

The Biomechanics Lab within the Beacom Premier Complex at Dakota State University (DSU) is currently under construction and work on securing funding for equipment is taking place. The Biomechanics Lab will be a specialized facility designed to support research and education in biomechanics, kinesiology, and related fields. This lab will be equipped with advanced technology to analyze human movement and study physical performance. Here are some of the key features to be implemented as part of the Biomechanics Lab at DSU:

Advanced Motion Capture Technology: The lab will be equipped with motion capture systems that allow for precise analysis of human movement. These systems track and record the motion of individuals, helping to assess biomechanics, posture, gait, and other movement patterns. These technologies are used in research related to sports science, rehabilitation, and ergonomics.

Force Plates: The Biomechanics Lab will feature force plates, which measure the forces exerted on the ground during activities like walking, running, or jumping. This equipment is essential for analyzing the impact of movement on the body and can be used in sports performance assessments, injury prevention, and rehabilitation studies.

Video Analysis: High-speed cameras are often used for detailed video analysis of movement. These cameras, paired with software for analyzing video footage, allow researchers

to examine kinematics (movement patterns) and kinetics (forces) with great precision.

Ergonomics and Injury Prevention: The lab will support research and coursework focused on ergonomics, helping to assess how human movements can be optimized to reduce the risk of injury, improve athletic performance, and enhance rehabilitation strategies.

Research and Educational Opportunities: The Biomechanics Lab will be integral to DSU's academic programs, offering students hands-on experience with cutting-edge technology in biomechanics. Students studying areas such as sports science, physical therapy, kinesiology, and related fields can engage in research projects, internships, and practical coursework that use the lab's resources.

Collaborative Environment: The lab will be designed to foster collaboration between students, faculty, and researchers. Its high-tech equipment and modern design create an ideal environment for conducting studies, collecting data, and testing hypotheses related to human movement.

Business and Technology Focus

The Beacom Premier Complex is particularly focused on programs related to business, technology, and data science. It includes specialized labs and workspaces where students in these fields can gain hands-on experience with cutting-edge technology and software, providing them with a practical learning environment that supports their academic growth.

Athletic and Recreation Facilities

In addition to the academic components, the Beacom Premier Complex also has facilities dedicated to sports and recreation. These include high-quality spaces for both competitive and recreational sports activities, providing student-athletes with the resources they need to train and compete at a high level.

Modern Design and Amenities

The building itself features modern architecture, with an emphasis on open, light-filled spaces. It is equipped with amenities designed for both comfort and functionality, including seating areas, study zones, and areas for social interaction.

Section 9: Student Learning Assessment Plans and Results

If multiple programs, present each one separately.

- *Program Learning Outcomes (PLOs) Statements:*

    a. Demonstrate understanding of the structure and function of the human body.

    b. Demonstrate understanding and participate in research in exercise science.

    c. Demonstrate understanding of the relationship between physical activity, health, and nutrition.

    d. Demonstrate understanding of ways to maintain health throughout the lifespan.

    e. Demonstrate ability to perform, teach, and evaluate physical activity skills.

    f. Understand the basic principles of exercise testing and prescription for the general population and athletes.

- *Measures and Benchmarks Used for Each PLO:*

    A variety of measures are used to assess student competencies and the program goals. The following are the regular and systematic evaluations which are used to assess student skills and competencies as well as to modify and improve the program and its curriculum. 1.

    a. Course grades in major content courses in exercise science and physical education.

    b. Exercise Science Major Assessment Exam (Exit Exam) — locally developed examination covering program goals and objectives. Students must achieve a passing score of at least 70% on the exam.

    Course Grades: The Exercise Science Program assesses content knowledge in the following eight courses required in the major: EXS 180, EXS 252/452, EXS 350, EXS 353, EXS 400, EXS 405/482, EXS 454, and HLTH 422. These courses relate to the Exit Exam and students are required to earn a grade of “C” or better.

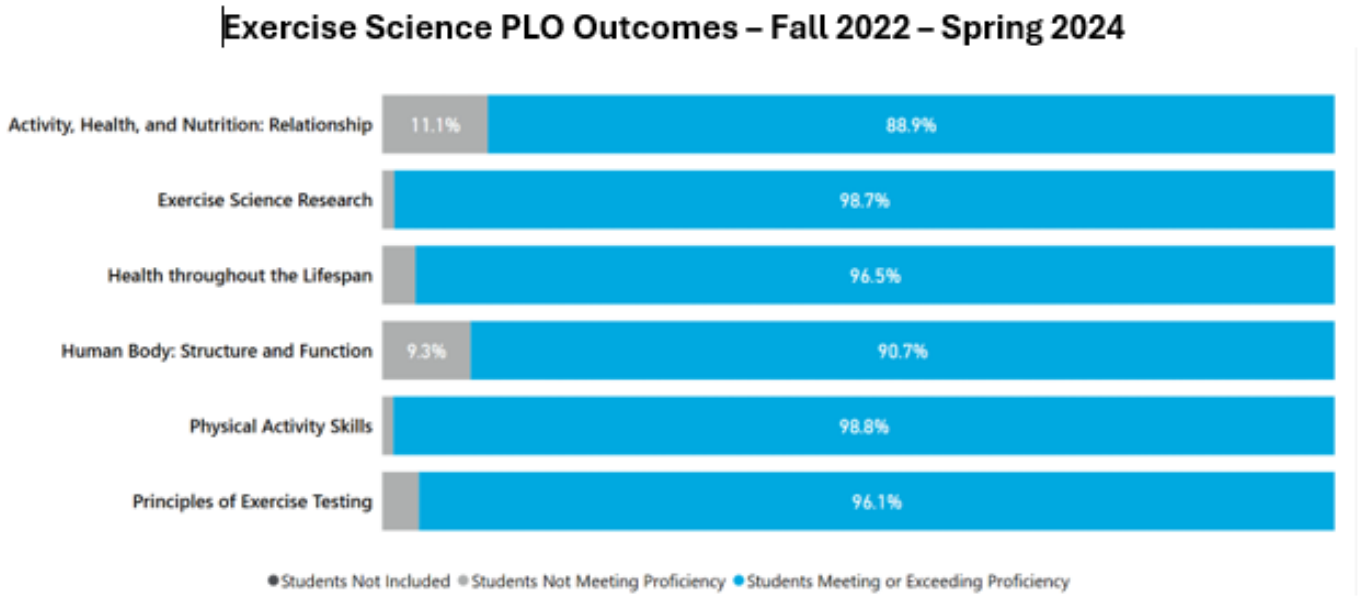
- *Curriculum Mapping:*

The Human Performance team is currently in the process of updating the Exercise Science programs Program Learning Outcomes (PLO’s). Once the new PLO’s are finalized and approved the team will conduct detailed curriculum mapping to determine

where in the curriculum the PLOs are focused on and met. This will potentially lead to additional curriculum changes based on overlaps, deficiencies, and strength in curricular design in meeting the PLOs.

Concurrently, curriculum mapping will take place regarding meeting the requirements for NSCA accreditation, curricular needs for students looking to get into various graduate programs, and curriculum needs for students looking to take various professional certification tests.

- *PLO Student Proficiency Results Trends:*



Final Grades for major Core Course

EXS 180 – Foundation of HPER

Semester	# of Students	Overall GPA	% with "A" Grade	% with "B" Grade	% with "C" Grade	% with "D" Grade	% with "F" Grade
FA 2018							
SP 2019							
FA 2019	24	2.75	37.5%	29.2%	16.7%	4.2%	12.5%
SP 2020	11	3.36	54.5%	27.3%	18.2%	0.0%	0.0%
FA 2020	29	2.76	48.3%	20.7%	10.3%	3.4%	17.2%
SP 2021							
FA 2021	12	2.42	25.0%	16.7%	41.7%	8.3%	8.3%
SP 2022	3	3.67	66.7%	33.3%	0.0%	0.0%	0.0%
FA 2022	19	2.95	47.4%	26.3%	5.3%	15.8%	5.3%
SP 2023	14	3.43	64.3%	28.6%	0.0%	0.0%	7.1%
FA 2023							
SP 2024							

EXS 350 – Exercise Physiology

Semester	# of Students	Overall GPA	% with "A" Grade	% with "B" Grade	% with "C" Grade	% with "D" Grade	% with "F" Grade
FA 2018							
SP 2019							
FA 2019	16	2.50	12.5%	31.3%	50.0%	6.3%	0.0%
SP 2020							
FA 2020	13	2.85	15.4%	53.8%	30.8%	0.0%	0.0%
SP 2021							
FA 2021	22	2.09	4.6%	41.0%	22.7%	22.7%	9.1%
SP 2022							
FA 2022	9	3.78	77.8%	22.2%	0.0%	0.0%	0.0%
SP 2023							
FA 2023	22	3.00	27.3%	45.5%	27.3%	0.0%	0.0%
SP 2024							

EXS 353 - Kinesiology

Semester	# of Students	Overall GPA	% with "A" Grade	% with "B" Grade	% with "C" Grade	% with "D" Grade	% with "F" Grade
FA 2018							
SP 2019							
FA 2019							
SP 2020	16	3.00	25.0%	50.0%	25.0%	0.0%	0.0%
FA 2020							
SP 2021	9	3.22	55.6%	33.3%	0.0%	0.0%	11.1%
FA 2021							
SP 2022	15	3.19	50.0%	31.3%	12.5%	0.0%	6.3%
FA 2022	9	3.22	22.2%	77.8%	0.0%	0.0%	0.0%
SP 2023	9	3.22	22.2%	77.8%	0.0%	0.0%	0.0%
FA 2023							
SP 2024	21	3.05	33.3%	42.9%	19.0%	4.8%	0.0%

EXS 400 – Exercise Test and Prescription

Semester	# of Students	Overall GPA	% with "A" Grade	% with "B" Grade	% with "C" Grade	% with "D" Grade	% with "F" Grade
FA 2018							
SP 2019							
FA 2019							

SP 2020	16	2.68	12.5%	50.0%	31.3%	6.3%	0.0%
FA 2020							
SP 2021	9	2.37	33.3%	44.4%	0.0%	0.0%	22.2%
FA 2021							
SP 2022	10	2.80	20.0%	40.0%	40.0%	0.0%	0.0%
FA 2022	13	3.71	71.4%	28.6%	0.0%	0.0%	0.0%
SP 2023	13	3.76	76.9%	23.1%	0.0%	0.0%	0.0%
FA 2023							
SP 2024	11	3.27	45.5%	45.5%	9%	0.0%	0.0%

EXS 454 - Biomechanics

Semester	# of Students	Overall GPA	% with "A" Grade	% with "B" Grade	% with "C" Grade	% with "D" Grade	% with "F" Grade
FA 2018							
SP 2019							
FA 2019	11	3.91	91.1%	9.0%	0.0%	0.0%	0.0%
SP 2020							
FA 2020	16	3.31	37.5%	56.3%	6.3%	0.0%	0.0%
SP 2021							
FA 2021	6	3.67	66.7%	33.3%	0.0%	0.0%	0.0%
SP 2022							
FA 2022	12	3.92	91.7%	9.3%	0.0%	0.0%	0.0%
SP 2023							
FA 2023	10	3.10	20%	70%	10%	0.0%	0.0%
SP 2024							

EXS 452 – Motor Development

Semester	# of Students	Overall GPA	% with "A" Grade	% with "B" Grade	% with "C" Grade	% with "D" Grade	% with "F" Grade
FA 2018							
SP 2019							
FA 2019							
SP 2020							
FA 2020							
SP 2021	21	3.52	57.1%	38.1%	4.8%	0.0%	0.0%
FA 2021							
SP 2022	15	3.60	80.0%	13.3%	0.0%	0.0%	6.7%
FA 2022							

SP 2023	15	3.13	13.3%	46.7%	20.0%	13.3%	6.7%
FA 2023	7	3.14	14.3%	85.7%	0.0%	0.0%	0.0%
SP 2024	17	3.41	47.1%	47.1%	5.9%	0.0%	0.0%

EXS 482 – Theory of Strength Training and Conditioning

Semester	# of Students	Overall GPA	% with "A" Grade	% with "B" Grade	% with "C" Grade	% with "D" Grade	% with "F" Grade
FA 2018							
SP 2019							
FA 2019	7	2.85	28.6%	28.6%	42.9%	0.0%	0.0%
SP 2020	5	2.40	0.0%	40.0%	60.0%	0.0%	0.0%
FA 2020	12	2.42	8.3%	41.7%	41.7%	8.3%	0.0%
SP 2021							
FA 2021	8	3.13	50.0%	12.5%	37.5&	0.0%	0.0%
SP 2022							
FA 2022	14	3.71	71.4%	28.6%	0.0%	0.0%	0.0%
SP 2023							
FA 2023	12	3.17	25%	66.7%	9.3%	0.0%	0.0%
SP 2024							

HLTH 422 - Nutrition

Semester	# of Students	Overall GPA	% with "A" Grade	% with "B" Grade	% with "C" Grade	% with "D" Grade	% with "F" Grade
FA 2018							
SP 2019							
FA 2019							
SP 2020	13	2.38	15.4%	38.5%	30.7%	0.0%	15.4%
FA 2020							
SP 2021	26	2.42	3.8%	57.7%	23.1%	7.7%	7.7%
FA 2021							
SP 2022	10	3.00	30.0%	40.0%	30.0%	0.0%	0.0%
FA 2022							
SP 2023	22	3.09	45.5%	36.4%	9.1%	0.0%	9.1%
FA 2023							
SP 2024	13	3.08	38.5%	46.2%	7.7%	0.0%	7.7%

HLTH 370 – Stress Management

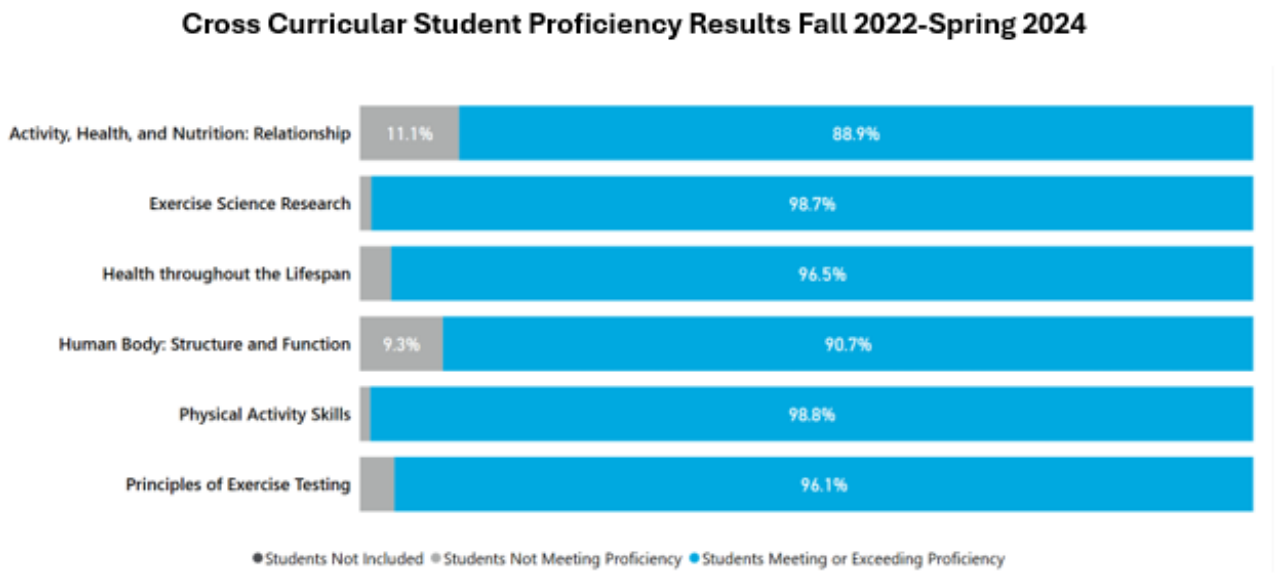
Semester	# of Students	Overall GPA	% with "A" Grade	% with "B" Grade	% with "C" Grade	% with "D" Grade	% with "F" Grade
FA 2018							
SP 2019							
FA 2019	11	3.50	75.0%	16.7%	0.0%	8.3%	0.0%
SP 2020							
FA 2020	23	2.78	60.9%	26.1%	0.0%	0.0%	13.0%
SP 2021							
FA 2021	16	3.88	93.8%	0.0%	6.3%	0.0%	0.0%
SP 2022							
FA 2022	7	3.43	85.7%	0.0%	0.0%	0.0%	14.3%
SP 2023							
FA 2023	19	3.42	63.2%	26.3%	5.3%	0.0%	5.3%
SP 2024	7	3.00	42.9%	28.6%	14.3%	14.3%	0.0%

Exercise Science Major Assessment (Exit) Exam:

The Exercise Science Major Assessment Exit Exam is a locally developed assessment and is a university graduation requirement for all Exercise Science majors. The assessment consists of 100 multiple choice questions covering all major goals of the program and is preferably taken during the student's final semester in the program.

Exit exams for all majors are required by the South Dakota Board of Regents prior to graduation. In the spring of 2013, the Exercise Science exit exam was revised to reflect appropriate standards students should meet or exceed prior to graduation. The current exit exam is based on the NSCA's CSCS exam and the ACSM's Health Fitness Specialist (now Certified Exercise Physiologist) exam. The new exit exam was piloted in the spring of 2013 and adopted in spring of 2014. Students have to pass the exit exam with a score of 70% or higher before they can start their internship. If a student does not pass the exam, they have to retake it until they pass.

- *Cross-Curricular Student Proficiency Results Trends:*



- *Changes Made to Curriculum, Institution, and/or Program Informed by Assessment Data Analyses:*

The faculty team is currently in the process of revising its program learning outcomes. Additionally this involves curriculum mapping courses and course learning outcomes to the new program learning outcomes. This will allow results to more accurately inform any needed adjustments in curriculum and instruction. This new more robust program assessment plan significantly strengthen the program.

Section 10: Alumni Placement & Satisfaction

If multiple programs, present each one separately.

- *Employment placement information for graduates since the last review:*

Year	2018	2019	2020	2021	2022	2023
Total number of graduates	10	3	11	14	4	16
Graduates accounted for:	9	3	11	12	4	12
*Graduates employed	6	0	8	8	2	4
*Graduates continuing education	3	3	3	4	2	8
*Graduates not seeking employment	0	0	0	0	0	0
Total placed	9	3	11	12	4	12
*Graduates still seeking	0	0	0	0	0	0
*Unable to contact	1	0	0	2	0	4
Program placement percentage	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**

- *Geographic distribution of recent graduates:*

Year	2021	2022	2023
Placed in South Dakota	7	1	4
Placed out of state	1	1	0

- *Graduate program satisfaction data, if available*:

  Not Applicable

Section 11: Program Opportunities for Improvement

If multiple programs, present each one separately. Discuss improvement areas as appropriate to the needs of a particular program.

- *Curricular content areas in need of improvement:*

  Improving the Exercise Science program involves continuous evaluation and the enhancement of key curricular content areas to ensure students are well-prepared for careers in fitness, rehabilitation, performance training, and healthcare. Some of these areas that could utilize further improvement:

  1. Anatomy and Physiology
     a. more hands-on cadaver lab experience
        i. DSU is working to create a cadaver lab in the School of Arts and Sciences that will be used as part of the Exercise Science program.

2. Biomechanics & Kinesiology

    a. Increased experiences with motion analysis software and force plate technology

        i. The current program utilizes more entry-level types of motion analysis software - more advanced types of software should be integrated into the curriculum.

3. Strength and Conditioning

    a. The Human Performance faculty are currently working to revise and update the Exercise Science curriculum to meet the standards required for NSCA program accreditation.

4. Nutrition and Metabolism

    a. Expansion of sport nutrition and supplementation curriculum/programming. Traditionally, the HLTH 422 course focuses on general nutrition.

        i. In Spring, 2025 - the program added EXS 225 Sport Nutrition as an elective course. This course is designed to meet the requirement of NSCA accreditation.

5. Clinical and Rehabilitation Services

    a. The program could expand collaborations with clinical/rehab services - specifically in Physical/Occupational Therapy and Athletic Training.

6. Technology and Emerging Trends

    a. The Exercise Science program needs to expand the integrations of wearable fitness technologies and AI-driven coaching tools.

- *Instructional areas in need of improvement:*

    Improving the Exercise Science program involves addressing key institutional areas to ensure students gain a well-rounded, evidence-based education that prepares them for future careers in fitness, rehabilitation, sports performance, and clinical settings.

    1. Behavior Change and Client Communication

a. The program can expand on preparation in motivational interviewing and coaching techniques. Additionally, preparation in strategies for client adherence and lifestyle modification.

2. Program Design and Business Skills

a. The program can expand on preparation regarding business models in fitness and wellness along with concepts in marketing, entrepreneurship, and professional networking skills.

- *Faculty supports in need of improvement:*

  The Human Performance faculty are committed to improvement and growth. There are several upcoming initiatives such as starting a new program that is a new Masters of Artificial Intelligence with Specialization in Biomechanics, a minor in Biomechanics, and potentially additional curriculum additions. If each of these measures are effective a key faculty support will be the addition of an additional full-time faculty member.

- *Facilities in need of improvement:*

  Please see the description of the new Biomechanics Lab on pages #####. As the new Biomechanics Lab becomes a reality we will need to revise and update the equipment in the current Human Performance Lab.

- *Financial supports in need of improvement:*

  The primary financial support ties into the new Biomechanics Lab and the cost for equipment, supplies and licenses associated with the new lab.

Appendix A: Student Plan of Study

DAKOTA STATE UNIVERSITY

Plan of Study

Exercise Science

Catalog Year: 2024 – 2025

Sample Schedule: students are not limited to this plan; it is meant to serve as a guide for planning purposes in discussions with your academic advisor. This plan is one possible path to completing this degree in ***four years.***

FIRST YEAR

First Semester

Course	Prerequisites / Comments	Credits	Semester(s) Offered
GS 100 University Experience		0	F
EXS 145 Intro to Exercise Science/PE		3	F/S
BIOL 151/151L (also counts as Nat Sci #1)		4	F/S
Soc Sci #1 (ECON/EPSY/POLS/SOC)		3	F/S/SU
CSC 105 Intro to Computers		3	F/S/SU
** Pick 12 course		3	F/S/SU
	Total Credit Hours	**16**	

Second Semester

Course	Prerequisites / Comments	Credits	Semester(s) Offered
BIOL 221 Human Anatomy & Lab	BIOL 151 and BIOL 151L	4	S
CIS 123 Problem Solving and Programming **or** CIS 130 Visual Basic Programming **or** CSC 150 Computer Science I		3	F/S/SU
MATH 114 College Algebra		3	F/S/SU
Nat Sci #2 (BIOL 153 or CHEM or PHYS)		4	S
Electives		2	
	Total Credit Hours	**16**	

SECOND YEAR

Third Semester

Course	Prerequisites / Comments	Credits	Semester(s) Offered
BIOL 325 Physiology & Lab	BIOL 151 or 153 or BIOL 221 and Chem 112	4	F
ENGL 101 Composition I		3	F/S/SU
Oral Communications (CMST 101, 215 **or** 222)		3	F/S/SU
Arts and Hum #1 (ARTH/MUS/THEA/foreign language)		3	F/S/SU
PE 207 Prof. Prep: Strength Training		1	F
Soc Sci #2 PSYC 101 General Psychology		3	F/S
	Total Credit Hours	**17**	

Fourth Semester

Course	Prerequisites / Comments	Credits	Semester(s) Offered
EXS 353 Kinesiology	BIOL 221	3	S
Elective		3	F/S
Arts and Hum #2 (ARTH/MUS/THEA/foreign language)		3	F/S
** Pick 12 course		3	F/S
ENGL 201 Composition II	ENGL 101	3	F/S
	Total Credit Hours	**15**	

THIRD YEAR

Fifth Semester

Course	Prerequisites / Comments	Credits	Semester(s) Offered
EXS 350 Exercise Physiology & Lab	BIOL 221 and Lab	4	F
Electives		12	
	Total Credit Hours	**16**	

Sixth Semester

Course	Prerequisites / Comments	Credits	Semester(s) Offered
** Pick 12 course		4	S
EXS 400 Exercise Test & Prescription	EXS 350	3	S
EXS 300 Intro to Research	ENGL 201	3	S
Electives		6	
	Total Credit Hours	**16**	

FOURTH YEAR

Seventh Semester

Course	Prerequisites / Comments	Credits	Semester(s) Offered
EXS 454 Biomechanics	BIOL 221 or EXS 353	3	F
EXS 482 Theory of Strength Training & Cond.	EXS 350	3	F
Electives		6	
	Total Credit Hours	**12**	

Eighth Semester

Course	Prerequisites / Comments	Credits	Semester(s) Offered
** Pick 12 course		3	F/S/SU
HLTH 422 Nutrition		3	S/SU
Electives		6	F/S
	Total Credit Hours	**12**	

P = Course Prerequisite

Semester: F = Fall; S = Spring; SU = Summer

Information and course schedules may change. This is not a contract.

**Pick 12 = See your advisor for the list of courses available to fulfill the 12 credits required.

Possible additional credentials using the 38 elective credits required for this program:

- **Biology major**
- **Health minor**
- **Strength & Conditioning minor**
- **Business minor**

Ask your advisor about other possible majors, minors, and endorsements that are available.

DAKOTA STATE UNIVERSITY

Plan of Study

Exercise Science

Catalog Year: 2023 – 2024

Sample Schedule: students are not limited to this plan; it is meant to serve as a guide for planning purposes in discussions with your academic advisor. This plan is one possible path to completing this degree in ***four years.***

FIRST YEAR

First Semester

Course	Prerequisites / Comments	Credits	Semester(s) Offered
GS 100 University		0	F
EXS 145 Intro to Exercise Science/PE		3	F/S
BIOL 151/151L (also counts as Nat Sci #1)		4	F/S
Soc Sci #1 (ECON/EPSY/POLS/SOC)		3	F/S/SU
CSC 105 Intro to Computers		3	F/S/SU
HLTH 100/PE 100 Wellness for Life/Activity		2	F/S/SU
	Total Credit Hours	**15**	

Second Semester

Course	Prerequisites / Comments	Credits	Semester(s) Offered
BIOL 221 Human Anatomy & Lab	BIOL 151 and BIOL 151L	4	S
CIS 123 Problem Solving and Programming **or** CIS 130 Visual Basic Programming **or** CSC 150 Computer Science I		3	F/S/SU
MATH 114 College Algebra		3	F/S/SU
Nat Sci #2 (BIOL 153 or CHEM or PHYS)		4	S
Electives		2	
	Total Credit Hours	**16**	

SECOND YEAR

Third Semester

Course	Prerequisites / Comments	Credits	Semester(s) Offered
BIOL 325 Physiology & Lab	BIOL 151 or 153 or BIOL 221 and Chem 112	4	F
ENGL 101 Composition I		3	F/S/SU
Oral Communications (CMST 101, 215 **or** 222)		3	F/S/SU
Arts and Hum #1 (ARTH/MUS/THEA/foreign language)		3	F/S/SU
PE 207 Prof. Prep: Strength Training		1	F
Soc Sci #2 PSYC 101 General Psychology		3	F/S
	Total Credit Hours	**17**	

Fourth Semester

Course	Prerequisites / Comments	Credits	Semester(s) Offered
EXS 353 Kinesiology	BIOL 221	3	S
EXS 335 Admin of Exercise Science	EXS 145	3	F/S
Arts and Hum #2 (ARTH/MUS/THEA/foreign language)		3	F/S
Electives		3	F/S
ENGL 201 Composition II	ENGL 101	3	F/S
	Total Credit Hours	**15**	

THIRD YEAR

Fifth Semester

Course	Prerequisites / Comments	Credits	Semester(s) Offered
EXS 350 Exercise Physiology & Lab	BIOL 221 and Lab	4	F
PE 354 Prev & Care of Athletic Injuries	Sophomore Class Standing	3	F/SU
EXS 452 Motor learning & Development		3	F/S
HLTH 370 Stress Management		3	F/S/SU
Electives		2	
	Total Credit Hours	**15**	

Sixth Semester

Course	Prerequisites / Comments	Credits	Semester(s) Offered
EXS 376 Technology Integration	CSC 105	3	S
EXS 395 Practicum	EXS 350 and Consent of Instructor	3	S
EXS 400 Exercise Test & Prescription	EXS 350	3	S
EXS 300 Intro to Research	ENGL 201	3	S
Electives		3	
	Total Credit Hours	**15**	

FOURTH YEAR

Seventh Semester

Course	Prerequisites / Comments	Credits	Semester(s) Offered
EXS 454 Biomechanics	BIOL 221 or EXS 353	3	F
EXS 482 Theory of Strength Training & Cond.	EXS 350	3	F
EXS 490 Seminar	Senior Class Standing	1	F
Electives		6	
	Total Credit Hours	**13**	

Eighth Semester

Course	Prerequisites / Comments	Credits	Semester(s) Offered
EXS 401 Clinical Exercise Physiology	EXS 350	3	S
EXS 494 Internship	EXS 395 and EXS 400 and Consent of the Instructor	2	F/S/SU
HLTH 422 Nutrition		3	S/SU
Electives		6	F/S
	Total Credit Hours	**14**	

P = Course Prerequisite

Semester: F = Fall; S = Spring; SU = Summer

Information and course schedules may change. This is not a contract.

DAKOTA STATE UNIVERSITY

Plan of Study

Exercise Science

Catalog Year: 2022 – 2023

Sample Schedule: students are not limited to this plan; it is meant to serve as a guide for planning purposes in discussions with your academic advisor. This plan is one possible path to completing this degree in ***four years.***

FIRST YEAR

First Semester

Course	Prerequisites / Comments	Credits	Semester(s) Offered
EXS 145 Intro to Exercise Science		1	F
Nat Sci #1 (BIOL 151/151L)		4	F/S
Soc Sci #1 (ECON/EPSY/POLS/SOC)		3	F/S/SU
EXS 180 Foundations of HPER		2	F/S
CSC 105 Intro to Computers		3	F/S/SU
HLTH 100/PE 100 Wellness for Life/Activity		2	F/S
	Total Credit Hours	**15**	

Second Semester

Course	Prerequisites / Comments	Credits	Semester(s) Offered
Soc Sci #2 PSYC 101 General Psychology		3	F/S
CIS 123 Problem Solving and Programming **or** CIS 130 Visual Basic Programming **or** CSC 150 Computer Science I		3	F/S/SU
MATH 114 College Algebra		3	F/S/SU
Nat Sci #2 (BIOL 153 and 153L)		4	S
ENGL 101 Comp I		3	F/S/SU
	Total Credit Hours	**16**	

SECOND YEAR

Third Semester

Course	Prerequisites / Comments	Credits	Semester(s) Offered
EXS 295 Practicum		1	F/S
ENGL 201 Composition II	ENGL 101	3	F/S
Oral Communications (CMST 101, 215 **or** 222)		3	F/S/SU
Arts and Hum #1 (ARTH/MUS/THEA/foreign language)		3	F/S/SU
PE 207 Prof. Prep: Strength Training		1	F
Electives		3	
	Total Credit Hours	**14**	

Fourth Semester

Course	Prerequisites / Comments	Credits	Semester(s) Offered
BIOL 221 Human Anatomy & Lab	BIOL 151 and BIOL 151L	4	S
EXS 452 Motor Learning & Development		3	S
Arts and Hum #2 (ARTH/MUS/THEA/foreign language)		3	F/S
HLTH 422 Nutrition		3	S/SU
Electives		2	F/S
	Total Credit Hours	**15**	

THIRD YEAR

Fifth Semester

Course	Prerequisites / Comments	Credits	Semester(s) Offered
BIOL 325 Physiology & Lab	BIOL 151 or 153 or BIOL 221 and Chem 112	4	F
EXS 335 Admin of Exercise Science	EXS 180	3	F online
EXS 350 Exercise Physiology & Lab	BIOL 221 and Lab	4	F
PE 354 Prev & Care of Athletic Injuries	Sophomore Class Standing	3	F/SU
	Total Credit Hours	**14**	

Sixth Semester

Course	Prerequisites / Comments	Credits	Semester(s) Offered
EXS 300 Intro to Research	ENGL 201	3	S
EXS 353 Kinesiology	BIOL 221	3	S
EXS 376 Technology Integration	CSC 105	3	S
EXS 395 Practicum	EXS 350 and Consent of Instructor	2	S
EXS 400 Exercise Test & Prescription	EXS 350	3	S
	Total Credit Hours	**14**	

FOURTH YEAR

Seventh Semester

Course	Prerequisites / Comments	Credits	Semester(s) Offered
EXS 454 Biomechanics	BIOL 221 or EXS 353	3	F
EXS 482 Theory of Strength Training & Cond.	EXS 350	3	F
EXS 490 Seminar	Senior Class Standing	1	F
HLTH 370 Stress Management		3	F/SU online
Electives		6	
	Total Credit Hours	**16**	

Eighth Semester

Course	Prerequisites / Comments	Credits	Semester(s) Offered
EXS 401 Clinical Exercise Physiology	EXS 350	3	S
EXS 494 Internship	EXS 395 and EXS 400 and Consent of the Instructor	2	F/S/SU
Electives		10	F/S
	Total Credit Hours	**16**	

P = Course Prerequisite

Semester: F = Fall; S = Spring; SU = Summer

Information and course schedules may change. This is not a contract.

DAKOTA STATE UNIVERSITY

Plan of Study

Exercise Science

Catalog Year: 2021 – 2022

Sample Schedule: students are not limited to this plan; it is meant to serve as a guide for planning purposes in discussions with your academic advisor. This plan is one possible path to completing this degree in ***four years.***

FIRST YEAR

First Semester

Course	Prerequisites / Comments	Credits	Semester(s) Offered
EXS 145 Intro to Exercise Science		1	F
Nat Sci #2 (BIOL 153/153L, CHEM 112/112L **or** PHYS 111/111L		4	F/S
Soc Sci #1 (ECON/EPSY/GEOG/POLS/SOC)		3	F/S/SU
EXS 180 Foundations of HPER		2	F/S
CSC 105 Intro to Computers		3	F/S/SU
HLTH 100/PE 100 Wellness for Life/Activity		2	F/S
	Total Credit Hours	**15**	

Second Semester

Course	Prerequisites / Comments	Credits	Semester(s) Offered
Soc Sci #2 PSYC 101 General Psychology		3	F/S
CIS 123 Problem Solving and Programming **or** CIS 130 Visual Basic Programming **or** CSC 150 Computer Science I		3	F/S/SU
MATH 114 College Algebra (MATH 095 or "C" in Math 101)		3	F/S/SU
Arts and Hum #1 (ARTH/MUS/THEA/foreign language)		3	F/S
ENGL 101 Comp I		3	F/S/SU
	Total Credit Hours	**15**	

SECOND YEAR

Third Semester

Course	Prerequisites / Comments	Credits	Semester(s) Offered
EXS 295 Practicum		1	F/S
ENGL 201 Composition II	ENGL 101	3	F/S
Oral Communications (CMST 101, 215 **or** 222)		3	F/S/SU
Nat Sci #1 (BIOL 151 and 151L)		4	F
PE 207 Prof. Prep: Strength Training		1	F
Electives		2	
	Total Credit Hours	**14**	

Fourth Semester

Course	Prerequisites / Comments	Credits	Semester(s) Offered
BIOL 221 Human Anatomy & Lab	BIOL 151 and BIOL 151L	4	S
EXS 452 Motor Learning & Development		3	S
Arts and Hum #2 (ARTH/MUS/THEA/foreign language)		3	F/S
HLTH 422 Nutrition		3	S/SU
Electives		2	F/S
	Total Credit Hours	**15**	

THIRD YEAR

Fifth Semester

Course	Prerequisites / Comments	Credits	Semester(s) Offered
BIOL 325 Physiology & Lab	BIOL 151 or 153 or BIOL 221 and Chem 112	4	F
EXS 335 Admin of Exercise Science	EXS 180	3	F online
EXS 350 Exercise Physiology & Lab	BIOL 221 and Lab	4	F
PE 354 Prev & Care of Athletic Injuries	Sophomore Class Standing	3	F/SU
	Total Credit Hours	**14**	

Sixth Semester

Course	Prerequisites / Comments	Credits	Semester(s) Offered
EXS 300 Intro to Research	ENGL 201	3	S
EXS 353 Kinesiology	BIOL 221	3	S
EXS 376 Technology Integration	CSC 105	3	S
EXS 395 Practicum	EXS 350 and Consent of Instructor	2	S
EXS 400 Exercise Test & Prescription	EXS 350	3	S
	Total Credit Hours	**14**	

FOURTH YEAR

Seventh Semester

Course	Prerequisites / Comments	Credits	Semester(s) Offered
EXS 454 Biomechanics	BIOL 221 or EXS 353	3	F
EXS 482 Theory of Strength Training & Cond.	EXS 350	3	F
EXS 490 Seminar	Senior Class Standing	1	F
HLTH 370 Stress Management		3	F/SU online
Electives		6	
	Total Credit Hours	**16**	

Eighth Semester

Course	Prerequisites / Comments	Credits	Semester(s) Offered
EXS 401 Clinical Exercise Physiology	EXS 350	3	S
EXS 494 Internship	EXS 395 and EXS 400 and Consent of the Instructor	2	F/S/SU
Electives		11	F/S
	Total Credit Hours	**17**	

P = Course Prerequisite

Semester: F = Fall; S = Spring; SU = Summer

Information and course schedules may change. This is not a contract.

Appendix B: Faculty Vitae

SCOTT KLUNGSETH

908 Prairie Park Dr.

Beresford, SD 57004

605-763-5776 (H)

605-228-3540 ©

Education

Doctorate of Education in Curriculum and Instruction– Ed.D: December, 2008. University of South Dakota, Vermillion, SD

Master of Arts in Teaching and Learning – M. A.: Health and Physical Education June 2000, Northern State University, Aberdeen, SD

Bachelor of Arts in Health, Physical Education, Recreation supported by History and Athletic Training minors. May 1995, Augustana College, Sioux Falls, SD

Teaching Endorsements in K-12 Health/Physical Education, Adaptive Physical Education, 7-12 History, 7-12 Sociology, Driver's Education, and Multiple Coaching Endorsements

Teaching Experience

Higher Education – Associate Professor of EXS/PE – Dakota State University: 8/2013 - Present

> Undergraduate, Graduate and online courses in Exercise Science and Physical Education
>
> Graduate Level: Facility, Risk, and Event Management in Sports; Fan Experience Sportainment, and Brand Management.
>
> Undergraduate Level: Nutrition; Applied Sport and Exercise Science; Elementary Methods in Physical Education; Administration in Exercise Science; Administration in Physical Education; Biomechanics; Kinesiology; Motor Learning and Development; Stress Management; Obesity and Weight Management; Technology in Physical Education and Exercise Science; Curriculum in Physical Education; Secondary Methods in Physical Education; Tests and Measurements; Practicum in Elementary Adaptive

Physical Education; Practicum in Secondary Adaptive Physical Education; Community Health; Seminar in Exercise Science; Applied Sport and Exercise Science

Higher Education – Visiting Professor of HPER – Augustana College: 6/2012 – 8/2014

Undergraduate and online courses in Physical Education Pedagogy, Sport Management, Tests and Measurements, Physical Education Methods, Coach Education, Organization and Administration, and Physical Education Methods for Classroom Teachers

K-9 Teaching – K-9 Health and Physical Education

Dell Rapids St. Mary Schools, Dell Rapids, SD. August 2011-8/2012

Middle/Secondary Teaching – 6-12 Health and Physical Education

Beresford High School, Beresford, SD. August 2007- July 2010

Higher Education - Instructor of HPE - Northern State University, Aberdeen, SD

Undergraduate, graduate, and online courses in Physical Education Pedagogy, Sport Management, Tests and Measurements, and Coach Education
September 1999 – August 2007

Secondary Teaching –Health, U.S./World History, Sociology, Physical Education,

Jr. High Social Studies. Langford High School, Langford, SD, September 1997 – August 1999

Secondary Teaching – Health, U.S. History, World History

Buhl High School. , Buhl, IDSeptember 1996 – August 1997

Professional Leadership Experience

Director – Beresford PRCE. – Direct supervision of the Kids Konnection After-School Program, the Summer Kids Konnection Program, Beresford Baseball/Softball Association, the Watchpuppy Pre-School, and all Community Education programs. February 2018 – October 2023

Project Director – “Watchdogs and Wellness Initiative” A comprehensive collaborative partnership in Beresford, SD and the surrounding rural areas to fight obesity and negative health behaviors in throughout the age range. May 2008 – October 2023

Owner – Achieve Grants Development – Application development, editing, assessments/evaluations, consulting on federal, regional, state, foundation, and corporate forms of external funding August 2011 – August 2021

Project Director – “Building Our Future” 21st Century Community Learning Center (21st CCLC) Alcester-Hudson School District July 2016 – July 2020

Project Director – “Classroom Innovation for Kinesthetic Learning” SD Classroom Innovation Grant – Beresford School District. Project Director for $78,000 state grant. February 2017 -2019

Project Director - “Classroom Innovation for Kinesthetic Learning” SD Classroom Innovation Grant – Alcester-Hudson School District. Project Director for $80,000 state grant. February 2017 -2019

Project Director – “Building on Success” Carol M. White PEP Grant. Beresford School District Project Director for $800,000 federal grant. October 2013 – May 2017

External Assessment/Evaluation Specialist – “Get Fit” Carol M. White Physical Education Progress Grant. Shepherd School District. Lead and coordinate all assessments and evaluations for $500,000 federal grant. August 2014 – June 2016

Coordinator of Assessments and Evaluations – “Watchdogs of the Future” Carol M. White Physical Education Progress Grant. Beresford Area Community Education Program. Lead and coordinate all assessment for $600,000 federal grant. September 2013 – October 2014

External Assessment/Evaluation Specialist – “Health Youth-Healthy Future” Carol M. White Physical Education Progress Grant. Tea Area School District. Lead and coordinate all assessment for $550,000 federal grant. September 2011 – October 2014

Executive Director– South Dakota Association for Health, Physical Education, Recreation & . Dance (SDAHPERD)March 2011 – May 2014

Project Director – “Watchdogs of the Future” Carol M. White Physical Education Progress Grant. Beresford Area Community Education Program.Project director for $600,000 federal grant. September 2011 – September 2013

Head Start Body Start Physical Activity Consultant – National Center for Physical Development and Outdoor Play, Head Start Body Start Grant Program. Summer, 2009 – Fall, 2011

Carol M. White PEP Project Director – Beresford School District. Project director for $243,000 federal grant. July 2008 – September 2010

Coordinator of HPE Internships and Field Experiences – Northern State University. Sports Marketing, Fitness Management, Non-Teaching Physical Education. Summer, 2006 – Summer, 2007

Director of Future Teacher’s Academy – Northern State University. Fall, 2003 – July 2007

Awards

National Play Ambassador (2018-2019) – Chosen by the National Afterschool Association and the Genius of Play-TOY Association to serve as a National Play Ambassador for 2018-2019

Leaders of the Movement (2018) – Recognized by the KidsFit company as a leader in the movement towards the integration of kinesthetic-based learning and strategies.

DSU Faculty Appreciation Recipient (2015)- Recommended by DSU Student-Athlete for Faculty Appreciation Recognition

Friend of the Watchdog (2013) – Awarded based on commitment, volunteerism, promotion, and extreme dedication to developing the community of Beresford and the Beresford School District.

Teacher of Influence (2013) – Student nominated at Augustana College

Secondary Teacher of the Year (2008) – South Dakota Association for Health, Physical Education, Recreation and Dance

NSU Champs/Lifeskills Teacher Who Makes a Difference (2005, 2007) – Student nominated at Northern State University

Who's Who Among America's Teachers (2002, 2005) – Student nominated

Technology Competencies

· Many Microsoft Office Suite and Apple OS Products

· Various Products in Google Drive

· Neurotracker

· Numerous Forms of Data Analysis Software

· Dartfish Motion Analysis Software

· Optogait Gait Analysis Software

· POLAR, Ekho, and IHT Heart Rate Monitors

· FitnessGram/Presidential Youth Fitness Program (PYFP) Assessments

· SurveyMonkey

· D2L, Webadvisor, Webmail

· Various Forms of Social Media

Additional Professional Development and Certifications

SCAHPERD Conference - 2024

BOOST OST Conference - 2022

National After-School Convention – 2022, 2018, 2017, 2016

Action Based Learning Professional 3L Training – May 2018

SHAPE-America Central District Convention – January 2018

Active Classrooms professional training - July 2017

SHAPE-America National Convention – 2017, 2016, 2015, 2014, 2013, 2012, 2011, 2010, 2009, 2007, 2006, 2005

SHAPE-SD Convention – 2021, 2016, 2015, 2014,2013, 2012, 2011, 2010, 2009, 2006, 2005, 2004, 2003

Specialized Training with OptoGait Gait Analysis Technologies – December 2014

Dartfish Certified Technologist – November 2014

BeFit2Learn Physical Activity in the Classroom Training – Summer, 2014; Summer, 2013; Summer, 2012

CDAHPERD Leadership Summit – Summer 2014, 2013, 2012, 2011, 2010

Certified Trainer in Action Based Learning – Spring, 2014

IHT Spirit System Training and Experience – Fall, 2013

FitSTEP PRO Pedometer Data Collection Training and Experience – Fall, 2013

SPARK PE Curriculum Training – Summer, 2013

Physical Best for Higher Education Specialist Certification – Spring, 2013

Physical Education Teacher Education Program and NCATE Training – Fall, 2012

POLAR Heart Rate Monitor Training – Summer, 2012; Summer, 2008; Summer, 2005

POLAR TriFit Evaluation System Training- Summer, 2012; Summer, 2008; Summer, 2005

POLAR PE Manager Training- Summer, 2012; Summer, 2008, Summer, 2005

Head Start Body Start Physical Activity Consultant Training – Spring, 2010

National Fly Fishing in Schools Program Training – Winter, 2010

Project WILD/Project Aquatic Conservation and Environmental Education – Fall, 2009

Geomotion Meaningful Movement Lab Training – Fall, 2009

SPARK Physical Education Curriculum Training – Fall, 2009

Physical Best Health-Fitness Instructor Certification – Spring, 2009

National Archery in Schools Program Training – Fall, 2008

Professional and Academic Association Memberships

SHAPE-SD (Society of Health and Physical Educators South Dakota) 2001 – Present

SoDakSACA. 2019 - 2022

National Afterschool Association. 2016 - 2022

SHAPE America (National Society of Health and Physical Educators). 2001 – 2018

American College of Sports Medicine (ACSM). 2014 – 2016

National Strength and Conditioning Association (NSCA). 2014 – 2016

Northland Chapter of National Strength and Conditioning Association. 2014 – 2016

Publications

Klungseth, S., & Anderson, K. (2024). Teaching by Day, Moonlighting by Night: Moonlighting as a Response to Low Teacher Pay. *American Journal of Educational Research*, *12*(2), 38–43. https://doi.org/10.12691/education-12-2-2.

Klungseth, S. (2010). Good Reads for Health and Physical Education Teachers. *SDAHPERD Journal*, Spring Edition

Klungseth, S. (2008). A Comparison Between Public Elementary Physical Education Programs in South Dakota and the STARS Criteria for High Quality Physical Education. *University of South Dakota ProQuest Dissertations Publishing.* 3351183.

Klungseth, S. (2007). Individuals with Disabilities and Interscholastic Athletics *Coach and Athletic Director*, January Edition.

Klungseth, S. "(2005). The Five NCAA Recruiting Rules that H.S. Coaches Should Know. *Coach and Athletic Director*, April 1 Edition

Klungseth, S. (2004). Getting Yourself Recruited: A Guide for High School Athletes. *Coach and Athletic Director*, April Edition.

Research Presentations

"Assessment of Graduate Assistant Burnout"

-research poster presentation at National SHAPE American Conference, April 2024

"Student Perceptions of Flexible Seating in the College Classroom"

-research poster presentation at SCAHPERD Conference, November 2024

“Teaching by Day, Moonlighting by Night”

-presented at South Dakota TIE Conference, April 2024

“Student Perceptions of Flexible Seating in the College Classroom”

-presented at the Dakota State University Research Symposium, April 2024

“Calorie Consumption, Strength Development, and Speed/Agility Development Between Fitwall HIIT Workouts and Traditional Workouts”

– presented at the DSU Research Day April 2018

“A Comparison of Non-Motorized & Motorized Treadmills in Calorie Burn, Rate of Perceived Exertion, Actual Exertion, and Stride Length”

– presented at the DSU Research Day April 2015

Education, Out-Of-School Time, Health, Physical Education, and Exercise Based Presentations

“Thinking Outside-the-Box for Standards: Creative Ideas, Common Equipment”

-scheduled to present at the National SHAPE American Conference, April 2024

“Understanding Your “Why” Versus your “What

-presented at SCAHPERD Conference, November 2024

“Minimal Space, Minimal Equipment: Activities for All Situations”

-presented at SCAHPERD Conference, November 2024

“Outside the Box: Creative Ideas with Common Equipment”

-presented at SCAHPERD Conference, November 2024

“Knowing Your Why versus Your What”

-presented at the Educator’s Rising Conference, Summer 2022

“Knowing Your Why versus Your What”

-presented at the DSU Dakota Dreams Conference, Summer 2022

“Knowing Your Why versus Your What”

-presented at the National BOOST Conference, April 2022

“Knowing Your Why versus Your What”

-presented at the National After-School Conference, March 2022

“Knowing Your Why versus Your What”

-presented at the Educator’s Rising Conference, February 2022

“Kinesthetic Learning Strategies for Classroom Teachers”

-presented at Dakota State University summer TEACH Camp, May 2020

SHAPE-SD Conference (Invited Presenter)

-- presented both “Outside the Box” and “Minimal Space-Minimal Equipment” in November 2019

South Dakota Department of Education Conference (Invited Presenter)

Presented both “Kinesthetic Learning Strategies for Classroom Teachers” and “Minimal Space-Minimal Equipment” sessions, May 2019

“Teaching PETE Students to Integrate Multi-Disciplinary Academics in Traditional Activities”

-presented at SHAPE-America National Physical Education Teacher Education (PETE) Conference, October 2018

South Dakota Department of Education Conference (Invited Presenter)

- presented both “Outside the Box” and “Minimal Space-Minimal Equipment” in August 2018

“Outside the Box III” (Invited Presenter)

-presented at 2018 YMCA of Central Florida Summer Training Institute

“Minimal Space – Minimal Equipment” (Top Presenter)

-presented at the 2018 National Afterschool Convention

“Outside the Box: Creative Ideas with Common Equipment”

-presented at 2018 CD-SHAPE Conference

“The Top 10 of Leadership”

-Keynote Speech at 2017 SoDakSACA Conference

“Outside the Box: Creative Ideas with Common Equipment”

-presented at 2017 SoDakSACA Conference

“Minimal Space – Minimal Equipment”

-presented at 2017 SoDakSACA Conference

“Outside the Box II”

-presented at 2017 YMCA of Central Florida Summer Training Institute

“Outside the Box II”

-presented at 2017 National Afterschool Association Conference

“Outside the Box: Creative Ideas with Common Equipment”

-presented at 2016 SHAPE-ND Conference

“Minimal Space-Minimal Equipment”

-presented at 2016 SHAPE-ND Conference

“Outside the Box: Creative Ideas with Common Equipment”

-presented at YMCA of Central Florida Summer Training Institute

“Developing A Community-Wide Health and Wellness Initiative’

-presented at 2016 national SHAPE-America Convention – April 2016

“Developing a Community-Wide Youth Wellness Initiative”

-presented -2016 National Afterschool Association Convention – March,2016

“Outside the Box: Creative Ideas Common Equipment” (Top Presenter)

- presented -2016 National Afterschool Association Convention – March,2016

“Activities for Active Classroom Academics – K-12”

-presented 4-hour workshop at Shepherd School District, Shepherd, MT – Aug. 2015

“Minimal Space-Minimal Equipment

-presented at SHAPE American National Convention – March 2015

“Thinking Outside-the-Box: Creating Meaningful Activities for Elementary Students”

-presented at SHAPE Central District Convention – Feb. 2015

“Active Academic for the Elementary Classroom”

-presented at West Central School District – Jan. 2015

"Developing a Community-Wide Youth Nutrition and Physical Fitness Initiative"

-presented at 2014 AAHPERD Convention

"Thinking Outside-the-Box: Creating Meaningful Activities for Elementary Students" (Top Presenter)

-presented at 2014 AAHPERD Convention

"Activities for Active Academics"

-presented at 2014 SDAESP/SDASSP Joint Conference

"Using Fitlights to Create High Intensity Exercise Programs"

-presented at 2013 SDAHPERD Convention

"Hula Hoops Extravaganza"

– presented at 2012 CDAHPERD Convention

"Thinking Outside-the-box: Creating Meaningful Activities for Elementary Students"

-presented at 2012 SDAHPERD Convention

"Hula Hoops Extravaganza"

- presented at 2011 SDAHPERD Convention

"Creating Leadership in Education"

- presented at 2011 Fargo Area Schools Summer Teachers Conference

"Hula Hoops Extravaganza"

– presented at 2011 Fargo Area Schools Summer Teachers Conference

"Technology Integration in Physical Education"

-presented at AAHPERD Central District Leadership Summit, July 2010

"Integration of Geomotion Mats in Health/Physical Education"

-presented at Harrisburg Physical Education, Health and Wellness

Summer Clinic, June 2010

"Technology Integration in Physical Education"

-presented at SDAHPERD Convention, November 2009

"Best Practice Speaker" – Policy in Action! Implementing, Monitoring and Evaluating -Your Local Wellness Policy Training Event, July 2009

"Heart Rate Monitors and Other Technology in PE"

-presented at Harrisburg Physical Education, Health and Wellness Summer Clinic, June, 09

“Digital Video Technology for Sport Management and Physical Education”

-co-presented at 2006 National AAHPERD Convention

“Five NCAA Recruiting Rules that H.S. Basketball Coaches Should Know”

-presented at 2005 South Dakota Basketball Coaches Convention

“Know the Terminology for Your Profession”

-presented at 2004 SDAAHPERD Convention

“Preparing Teacher Education Students to Experience Cultural Diversity”

-presented at 2004 SDAAHPERD Convention

Research Projects

Faculty Research Initiative Award – Integrating Action Based Learning/Kinesthetic Classroom in Higher Education

“Assessment of Athletic Graduate Assistant Burnout” – data collection completed – current authoring article for publication – to be submitted Summer 2024

5-year Longitudinal Study of “Student Perception of Academic Focus in the Kinesthetic Classroom”

Faculty Research Initiative Award – “Calorie Consumption, Strength Development, and Speed/Agility Development Between Fitwall HIIT Workouts and Traditional Workouts” – completed in May 2018

Faculty Research Initiative Award – “A Comparison of Non-Motorized & Motorized Treadmills in Calorie Burn, Rate of Perceived Exertion, Actual Exertion, and Stride Length” - completed in December 2014 - January 2015

Authored Grants

South Dakota Community Foundation Grant – grant author for successful grant application for Adult ESL classes on behalf of Beresford PRCE – Fall 2023

Coronavirus Aid, Relief, and Economic Security Grant – grant author for successful grant application on behalf of Beresford PRCE. Spring 2022

Child Care Program Stabilization Grant – grant author for successful grant application on behalf of Beresford PRCE. Summer, 2021

CARES Act Grant – grant author for successful grant application on behalf of Beresford PRCE. September 2020

Minnesota Twins for Kids Grant – grant author for successful foundation grant on behalf of the Beresford Baseball-Softball Association. Summer, 2021

Beresford Community Foundation Grant - grant author for successful foundation grant on behalf of the Beresford Baseball-Softball Association. Summer, 2021

Legends for Kids Grant – grant author for successful foundation grant on behalf of Beresford PRCE. November 2018.

21st Century Community Learning Center (21st CCLC) Grant – grant author for successful 21st CCLC state grant on behalf of the Henry School District. June 2018

South Dakota Community Foundation – grant author for successful SDCF grant on behalf of Beresford Parks, Recreation, and Community Education – March 2017

Classroom Innovation Grant - South Dakota Department of Education – grant author for successful Classroom Innovation Grant on behalf of the Alcester-Hudson School District – November 2016

Classroom Innovation Grant - South Dakota Department of Education – grant author for successful Classroom Innovation Grant on behalf of the Beresford School District – November 2016.

21st Century Community Learning Center (21st CCLC) Grant – Grant author for successful 5-year $561,500 grant on behalf of the Alcester-Hudson School District – June 2016

Wellmark Foundation Kickstart Grant (Foundation Grant) – Grant author for successful $10,000 grant on behalf of Beresford Parks, Recreation, and Community Education – November 2015

SAMSHA Project AWARE Grant (Federal Grant) – Grant Author for successful 2-year $100,000 grant on behalf of the Neenah School District – September 2014

Carol M. White Physical Education Progress Grant (Federal Grant) – Grant author for successful 3-year $800,000 grant on behalf of the Beresford School District. September 2013

Georgia SHAPE Grant – Grant author for successful grant on behalf of a school district in Georgia. June 2012

Excellence in Education Grant (Foundation Grant) – Grant author for successful grant on behalf of Dell Rapids St. Mary School District. October 2011

IBM Smartkids Grant (Corporate Grant) – Grant author for successful grant on behalf of the Beresford Head Start Watchpuppy Depot. May 2011

Carol M. White Physical Education Progress Grant (Federal Grant) – Grant Author for successful 3-year $600,000 grant on behalf of Beresford Area Parks, Recreation, and Community Education. September 2011

Carol M. White Physical Education Progress Grant (Federal Grant) – Grant Author for successful 3-year $400,000 grant on behalf of Tea Area Schools. Sept 2011

Carol M. White Physical Education Progress Grant (Federal Grant) – Grant Author for successful 3-year $1.1 million grant on behalf of Oxford Hills School District. September 2011

Head Start Body Start Outdoor Play Space Grant (Federal Grant) – Grant Author for successful proposal on behalf of the Beresford Head Start Watch Puppy Depot. September 2010

ING Unsung Heroes Grant (Corporate Foundation) – Grant Author for successful proposal for Adventure/Outdoor Education and Mentoring course. July 2009

No Child Left Inside Grant (State Grant)- Grant Author for successful proposal South Dakota Game Fish and Parks grant. April 2009.

Carol M. White Physical Education Progress Grant (Federal Grant) – Grant Author for successful 3-year $300,000 grant on behalf of Beresford School District. June 2008

Collaborative Research Grant Recipient – "Integration of TriFit Fitness Assessment in Wellness Labs" April 2006 – April 2007

Bush Grant Recipient – "Preparing Teacher Education Students to Experience Cultural Diversity" April 2003 – April 2004

Governor's Grant Recipient – "Using Technology to Prepare Future Physical Education Teachers" April 2002 –April 2003

LOFTI Academy Grant Recipient – "Developing a Rubric for the Electronic Portfolio" May 2002

LOFTI Grant Recipient – "Promoting the Benefits of Your Physical Education Program" May 2001 – May 2002

Grant Reviewer Experience

Grant Reviewer – School Climate Transformation – LEA Grant Program. Summer, 2014

Grant Reviewer – National Center for Physical Development and Outdoor Play, Head Start Body Start Grant Program. Summer, 2010 and 2011

Grant Reviewer – Carol M. White Physical Education Progress Grant. May 2004 and 2006

Grant Related Publications and Presentations

"Grants – How, What, Where, and Who Qualifies"

-presented at 2014 AAHPERD Convention

"Grants – How, What, Where and Who Qualifies"

-presented at 2013 CDAHPERD Convention

“Other PE & Health Grants”

-presented at 2012 National PEP Summit

“Grants – How, What, Where and Who Qualifies”

-presented at 2012 National PEP Summit

“Grants – How, What, Where and Who Qualifies”

-presented in March 2011 AAHPERD National Convention

“Grants – How, What, Where and Who Qualifies”

-presented at February 2011 Central District AAHPERD Conference

“Grants – How, What, Where, Who Qualifies, and How to Write”

-presented in October 2010 PE4Life Resource Conference

“Grants – How, What, Where and Who Qualifies”

-presented at AAHPERD Central District Leadership Summit, July 2010

“Strategies in Grant Searching and Grant Writing for Educators”

-presented at Educators Summer Symposium, June 2010

“Grants – How, What, Where and Who Qualifies”

-presented at SDAHEPRD Convention, November 2009

“Simple Steps to Get You Going in the Grant Process, Part II: Writing Grants”

-published in SDAHPERD Journal, Fall, 09

“Simple Steps to Get You Going in the Grant Process, Part I: Grant Searching”

-published in SDAHPERD Journal, Fall, 09

“Grants – How What, Where and Who Qualifies”

-presented at 2009 Harrisburg Physical Education, Health and Wellness Summer Clinic

Service

DSU Honors Committee – Dakota State University. August, 2024 - Present

DSU Shared Governance Committee Member – Dakota State University. August, 2023 – . Present

DSU Student Awards Committee Member – Dakota State University. March, 2024 – Present

SHAPE Central District Scholar Committee – SHAPE Central District. September 2022 - Present

DSU Athletic Committee Member – Dakota State University. August 2021 – Present

DSU Student Admissions Committee Alternate Member – Dakota State University. August 2020 - Present

Wellness Committee – Beresford School District. July 2007 – Present

HPER Discipline Council – Dakota State University. August 2014 – Present

Exercise Science Search and Screen Committee – Dakota State University. June 2022 – September 2022

Dean – College of Education Search and Screen Committee – Dakota State University. December 2021 – May 2022

South Dakota Physical Education Content Standards Review Work Group – South Dakota Department of Education. Summer, 2020

University Diversity and Inclusion Committee – Dakota State University. Fall, 2017 – Spring, 2020

DSU Faculty Athletic Representative (FAR) – Dakota State University. August 2015 – Spring, 2019

Joint Projects Director – Society of Health and Physical Educators South Dakota (SHAPE-SD). August 2014 – Spring, 2018

DSU Assessment/Evaluation Committee – Dakota State University. August 2014 – May 2018

Program Assistant 1 Search and Screen Committee – Dakota State University. January 2018 – February 2018

Master Academic Planning Committee – Dakota State University. Fall, 2016 – Fall, 2017

General Education Review Committee – Dakota State University. Fall, 2015 – Spring, 2016

Board of Directors – Beresford Area Parks, Recreation, and Community Education. September 2010 - Present

Institutional Effectiveness Committee – Dakota State University. August 2014 – Spring 2016

President – Society for Health and Physical Educators – South Dakota (SHAPE-SD). May 2014 – November 2015

FIT Mentor – Dakota State University. August 2014 – August 2015

Search Committee Chair – Dakota State University Asst. Professor of Exercise Science Position. November 2014 – June 2015

Augustana Wellness Committee – Augustana College. August 2012 – August 2014

CDAHPERD/State Delegate – Representative Delegate to the American Alliance for Health, Physical Education, Recreation, & Dance (AAHPERD) Assembly (2014, 2013, 2012)

Coaching

JV Volleyball Coach – Beresford High School, Beresford, SD. Fall, 2022 – Fall 2024

Youth Baseball Coach – Various ages from 6-year-old Pee Wees to 16-year-old Teener's Baseball. Spring, 2009 – Summer 2022

Youth Basketball Coach - Various ages from 3rd grade basketball to 6th grade basketball. Winter, 2010 – Spring 2020

Hd. Boys' Basketball Coach – Beresford High School, Beresford, SD. Fall, 2008 – Summer, 2010

Assistant Volleyball Coach – Beresford High School, Beresford, SD. Fall, 2008 – Spring, 2011

Assistant Women's Volleyball Coach – Northern State University; NCAA DII. Fall, 1999 – Spring, 2005

Assistant Women's Basketball Coach – Northern State University: NCAA DII. Fall, 1999 – Spring 2003

Hd. Boys' Basketball Coach – Langford High School, Langford, SD. Fall, 1996 – Summer, 1999

Hd. Girls' Basketball Coach – Langford High School, Langford, SD. Fall, 1996 – Summer, 1999

Asst. Boys' Basketball Coach – Buhl High School, Buhl ID. Fall 1995 – Summer, 1996

CURRICULUM VITAE

Luke Chowning, PhD, CSCS
902 S Grant Ave, Madison, SD 57042 ▪ luke.chowning@dsu.edu ▪ 806.782.9245

EDUCATION

2022 Doctor of Philosophy (PhD) in Exercise Physiology - Research Focus in Biomechanics. Department of Kinesiology and Sport Management, Texas Tech University, Lubbock, TX
Dissertation: System and Joint Kinetic Differences Between the CounterMovement Vertical Jump and Loaded Jumps.
Committee Chair: John Harry, Ph.D., CSCS

2019 Master of Science (MS) in Kinesiology - Human Performance.
Department of Kinesiology and Sport Management, Texas Tech University, Lubbock, TX
Research: Effects of Maximalist Footwear on Joint Mechanical Output During Vertical Jump Performance
Mentor: John Harry, Ph.D., CSCS

2016 Bachelor of Science (BS) in Exercise Sport Science - General Health Promotion.
Department of Exercise and Sport Science, Lubbock Christian University, Lubbock, TX
Graduated *Cum Laude*
Mentor: Laurel Littlefield, Ph.D., ACSM-CEP

Published Research Articles

1. Krzyszkowski, J., **Chowning, L.D.**, Harry, J.R. (2022). Phase-specific Verbal Cue Effects on countermovement jump performance. *The Journal of Strength & Conditioning Research*, 36(12): 3352-3358.

2. Harry, J.R., Krzyszkowski, J., Harris, K., **Chowning, L.D.**, Mackey, E., Bishop, C., Barker, L.A. (2022). Momentum-based load prescriptions: Applications to Jump Squat Training. *The Journal of Strength & Conditioning Research*, 36(9): 2657-2662.

3. **Chowning, L. D.**, Krzyszkowski, J., & Harry, J. R. (2021). Maximalist shoes do not alter performance or joint mechanical output during the countermovement jump. *Journal of Sports Sciences*, *39*(1), 108-114.

4. **Chowning, L. D.**, Krzyszkowski, J., Nunley, B., Lanier, R., Gonzales, I., Calamoneri, T., ... & Harry, J. R. (2021). Biomechanical Comparison of Dominant and Non-Dominant Limbs During Leap-Landings in Contemporary Style Female Dancers. *Journal of Dance Medicine & Science: Official Publication of the International Association for Dance Medicine & Science*.

5. Harry, J. R., Barker, L. A., Tinsley, G. M., Krzyszkowski, J., **Chowning, L. D.**, McMahon, J. J., & Lake, J. (2021). Relationships among countermovement vertical jump performance metrics, strategy variables, and inter-limb asymmetry in females. *Sports Biomechanics*, 1-19.

6. Harry, J. R., Krzyszkowski, J., **Chowning, L. D.**, & Kipp, K. (2021). Phase-Specific Force and Time Predictors of Standing Long Jump Distance. *Journal of Applied Biomechanics*, *37*(5), 400-407.

7. Krzyszkowski, J., **Chowning, L. D.**, & Harry, J. R. (2020). Phase-Specific Predictors of Countermovement Jump Performance That Distinguish Good from Poor Jumpers. *Journal of strength & conditioning research*.

8. Harry, J.R., Barker, L.A., Krzyszkowski, J., **Chowning, L.D.**, Blinch, J. (2019). Low pass filter effects on metrics of countermovement vertical jump performance. *The Journal of Strength & Conditioning Research.*

Teaching Experience

2023-Current Assistant Professor

College of Education, Dakota State University, Madison, SD.

Courses taught:

EXS 295 - Practicum
EXS 300 – Introduction to Research
EXS 335 – Administration of Exercise Science
EXS 350 – Exercise Physiology
EXS 350L – Exercise Physiology Lab
EXS 353 – Kinesiology
EXS 400 – Exercise Testing and Prescription
EXS 401 – Clinical Exercise Physiology
EXS 452 – Motor Learning & Development
EXS 454 – Biomechanics
EXS 482 – Theory of Strength and Conditioning
EXS 490 – Seminar
EXS 494 – Internship
HLTH 100 – Wellness for Life (online)
HLTH 370 – Stress Management
HLTH 422 – Nutrition (online)
PE 207 – Professional Preparation: Strength Training
PE 217 – Advanced Strength Training

2019-2022 Graduate Part-Time Instructor

Department of Kinesiology and Sport Management, Texas Tech University, Lubbock, TX.

KIN 3306 - Applied Exercise Physiology Lab
KIN 4301 – Introduction to Biomechanics
KIN 4305 - Advanced Strength and Conditioning

2019-2022 Lecturer in Residence and Adjunct Instructor

Department of Exercise and Sport Science, Lubbock Christian University, Lubbock, TX.

ESS 1200 - Personal Fitness and Wellness (in-person & online)
ESS 1201 - Introduction to Exercise and Sport Science
ESS 3341 - Measurement and Evaluation in Exercise Physiology
ESS 4350 - Principles of Strength and Conditioning

ESS 4380 – Senior Research

ESS 4382 - Lifespan Motor Development (online)

2017-2019 Graduate Teaching Assistant
Department of Kinesiology and Sport Management, Texas Tech University, Lubbock, TX.

Courses taught:

PFW 1112 - Diet and Exercise
PFW 1113 - Beginner Golf
PFW 1127 - Bowling

Courses assisted as faculty teaching assistant:

KIN 3314 - Lifespan Motor Development
KIN 4301 - Introduction to Biomechanics

Presentations

1. **Chowning, L. D.**, Harris, K. N., Hite, M., Harry, J. R. Using momentum to optimize loaded jump training: A model statistic approach. National Strength & Conditioning Association National Conference. Las Vegas, NV. July 12-15, 2023

2. Harris, K. N., Simms, A., Hite, M., Jiwan, N. C., **Chowning, L. D.**, Harry, J. R. Predictors of fatigue induced anterior cruciate ligament injury risk factors in recreationally active females. National Strength & Conditioning Association National Conference. Las Vegas, NV. July 12-15, 2023

3. Harris, K. N., Krzyszkowski, J., **Chowning, L. D.**, Yang, J., Kolawole, L., Pati, D., Hashemi, S., & Harry, J. R. Comparison of walking mechanics between manual and automated IV poles. International Journal of Exercise Science: Conference Proceedings. Waco, TX. February 23-34, 2023.

4. **Chowning, L. D.** & Harry, J. R. Using momentum to assess loaded jump performance. Mid-South American Society of Biomechanics Conference. Memphis, TN. February 16-17, 2023.

5. **Chowning, L.D**., Krzyszkowski, J., & Harry, J.R. Maximal shoes do no alter performance or joint mechanical output during countermovement jumping. Mid-South American Society of Biomechanics Conference. Memphis, TN. February 20-21, 2020.

6. Harry, J.R., Blinch, J., Barker, L.A., **Chowning, L.D.**, & Krzyszkowski, J. Ground reaction force data from a countermovement jump test do not need smoothing for analysis. National Strength & Conditioning Association National Conference. Las Vegas, NV. July 8-11, 2020.

7. Krzyszkowski, J., **Chowning, L.D.**, & Harry, J.R. Countermovement jump phase-specific differences between poor and good jumper in Division 1 collegiate male basketball players. National Strength & Conditioning Association National Conference. Las Vegas, NV. July 8-11, 2020.

8. **Chowning, L.D.** & Littlefield, L.A. Exercise Using Lactate Threshold Measurements. International Symposium in Exercise and Health Science Research, Baylor University, Waco, TX. October 12-13, 2016.

Research Grants and Funding

2024 South Dakota Board of Regents Competitive Research Grant FY25
Project Title: *Advancing Biomechanical Research in Exercise Science: Fostering Undergraduate Research Initiatives and Establishing a Graduate Program*
Investigator: Luke Chowning
Role: PI
Total Award Amount: $83,695

2023 DSU Internal Seed Grant (**Awarded**)
Project Title: *Biomechanics research initiative*
Investigators: Luke Chowning
Role: PI
Total Award Amount: $12,127

2018 Student Research Funding – Department of Kinesiology and Sport Management (**Awarded**)
Project Title: *Comparison between standard and maximal cushioned shoes on vertical jump-landing performance*
Investigators: Luke Chowning, John R. Harry
Role: PI
Total Award Amount: $479.76

2016 EquipLCU Grant (**Awarded**)
Project Title: *The effect of test interruptions and work: rest ratio on exercise intensity at maximal lactate steady state in active individuals*
Investigators: Laurel Littlefield, Michael Said, Luke Chowning
Role: Co-PI
Total Award Amount: $400.00

Research Training

Equipment and Software:

- AMTI Dual Force Platform System
- AMTI portable force platform
- 12-camera Vicon Motion System
- Visual 3D
- SPSS
- Microsoft Excel
- Vicon

Awards and Recognitions

2022 Students' Choice Top Faculty in the College of Arts and Sciences
Texas Tech University

University Service

2023 – Current Assistant Professor – Dakota State University
Co-Coordinator for the College of Education MADLAB Research Space
Advising current and newly enrolled students
Recruiting perspective students

2021-2022 Lecturer in Residence – Lubbock Christian University
Advising undergraduate students
Mentoring senior research projects.

Current Professional Memberships

2018-Current National Strength and Conditioning Association (NSCA)

Certifications

2021-Current Certified Strength and Conditioning Specialist (CSCS)

Professional Affiliations

2021-2022 Southwest College Football Officials
Football Official for NCAA Divisions II & III, NAIA, and Junior College Conferences

2017-2022 Texas Association of Sports Officials – South Plains Chapter
Football Official
Member of the Board of Directors of the South Plains Chapter – Division V Representative

References

John Harry, PhD, CSCS
Assistant Professor
Texas Tech University
Department of Kinesiology and Sport Management
Phone: (949)285-4806
Email: john.harry@ttu.edu

Angela Lumpkin, PhD
Department Chair, Professor
Texas Tech University
Department of Kinesiology and Sport Management
Phone: (806)834-6935
Email: angela.lumpkin@ttu.edu

Chris Huggins, PT, DPT, ScD, COMT
Department Chair, Associate Professor
Lubbock Christian University
Department of Exercise and Sport Science
Phone: (972)322-8998
Email: chris.huggins@lcu.edu

David DeJong, PhD
Dean of the College of Education
Dakota State University
College of Education
Phone: (641)629-0200
Email: David.dejong@dsu.edu

SHANE SCHOLTEN

Dakota State University Home 820 N Washington Ave 26951 480th Ave. Madison, SD 57042
Sioux Falls, SD, 57108 E-mail: shane.scholten@dsu.edu Mobile: 605-201-5866

Education:

Ph.D., Nutrition, Exercise and Food Science, South Dakota State University, 2015. Dissertation titled, *"Vitamin D and antioxidant quercetin effects on muscular and cardiorespiratory performance in physically active adults."*

M.S., Exercise Science, University of Nebraska at Omaha, 1999.
Thesis titled*, "A Dynamical Systems Theory examination of intralimb coordination during running over obstacles of different heights."*

B.S., Fitness/Wellness Management, Dakota State University, 1997

Teaching Experience:

Associate Professor, 2024-Current
Dakota State University, Madison, SD
Courses: Biomechanics, Nutrition, Motor Learning and Development,

Internships, Practicum

Associate Professor, 2019-2024
Augustana University, Sioux Falls, SD
Courses: Biomechanics, Nutrition, Exercise Prescription, Current Topics, Exercise Leadership, Exercise Physiology labs, Science of Exercise, Introduction to Exercise Science, Cultural and Outdoor Adventures in Costa Rica

Assistant Professor, 2014-2019
Augustana University, Sioux Falls, SD
Courses: Biomechanics, Nutrition, Exercise Prescription, Facilities and Programming, Exercise Physiology labs, Science of Exercise, Introduction to Sports Management, Sports Administration Leadership Research

Assistant Professor, 2008-2014
University of Sioux Falls, Sioux Falls, SD
Courses: Biomechanics, Nutrition, Exercise Prescription, Exercise Physiology, Seminar in Health/ Fitness Instruction, Survey of Sport, Science of Coaching, Dimensions of Wellness

Adjunct Professor, 2009-2011
Augustana College, Sioux Falls, SD
Course: Biomechanics/Kinesiology
Adjunct Professor, 2002-2008
Grand View College, Des Moines, Iowa
Courses: Exercise Physiology, Fitness/Wellness Assessment, Leadership Skills for Conditioning

Adjunct Professor, 2005-2006
Central College, Pella, Iowa
Course: Sports Nutrition

Business Experience:

Manager/ Partner, 2002-2008
Work Systems Rehab & Fitness, P.C.
Pella, Iowa

Responsible for general club management

1. Managed 4 full time employees, 23 part time employees, and 15 volunteers. 2. Created sales and marketing promotions.
3. Building maintenance
4. Directly responsible for a $700,000 budget

5. Led exercise classes
6. Led member retention efforts
7. Responsible for legal issues and member safety
8. Managed the computer network of 23 computers
9. Managed and directed personal training

Iowa Sales and Marketing Manager, 2001-2002
Nova Health Equipment
Omaha, Nebraska & Des Moines, Iowa

Represented several exercise equipment manufacturers

1. Consulted with Iowa businesses, hospitals, colleges and high schools on exercise equipment needs
2. Installed and performed light service work of exercise equipment

Exercise Specialist, 1999-2001
Alegent Health – Immanuel Medical Center
Omaha, Nebraska

Designed and implemented health care based rehabilitation programs for post traumatic cardiac patients.

1. Designed exercise programs for cardiac rehab patients
2. Monitored EKG readings during exercise
3. Educated patients regarding nutrition and exercise
4. Designed research studies and collected data for ongoing studies

Presentations:

The Acute Effects of Ischemic Preconditioning on Short-duration Cycling: A Randomized Crossover Study. ACSM, Boston, MA. 31, May, 2024.

Using Functional Movement in Training and Rehabilitation. Northland ACSM, Duluth, MN. 22, March, 2024.

Eccentric Training for Performance and Rehabilitation. NSCA-SD, Sioux Falls, SD. 2 Dec, 2023.

Ischemic preconditioning: Can it improve physical performance? IDeA Central Region Conference, Zoom, 26 July, 2021.

The Acute Effects of Ischemic Preconditioning on Power and Sprint Performance. IDeA Central Region Conference, Zoom, 26 July, 2021.

Biomechanics of Posture: How to Grow an Inch Taller. Sioux Falls Science Pub, Sioux

Falls, SD. 18 June, 2019.

Physical Performance is not Improved with Vitamin D Repletion. Thematic Poster Session at American College of Sports Medicine Annual Meeting, Minneapolis, MN. 1 June, 2018.

The Relationship Between Vitamin D and Physical Performance/Nutritional Ergogenic Aids Activity. South Dakota NSCA State Clinic, Sioux Falls, SD. 9-10 March, 2018.

Will supplementation of vitamin D improve physical performance? South Dakota BRIN and EPSCOR Summer Research Symposium, Pierre, SD. 2 August, 2017.

Vitamin D and Physical Performance. Avera Orthopedic and Sports Medicine Symposium, Sioux Falls, SD. 9 June, 2017.

Effects of vitamin D and quercetin on athletic performance. Augustana College Biology Seminar Series, Sioux Falls, SD. 7 November, 2014.

The effects of vitamin D and an antioxidant quercetin on muscular and cardiorespiratory performance in physically active adults. Dakota Wesleyan University Research Seminar, Mitchell, SD. 21 October 2014.

Association between vitamin D status and physical performance in young adult females. Poster Presentation, Experimental Biology, San Diego, CA. 28 April 2014.

Vitamin D supplementation has no effect on muscular function in vitamin D sufficient adults. Poster Presentation, ACSM's 61st Annual Meeting, Orlando, FL. 30 May 2014.

Vitamin D does not correlate with BMI or cardiovascular fitness in young adults with sufficient vitamin D status. Poster Presentation, Experimental Biology, Boston, MA. 22 April 2013.

Correlation of vitamin D and fitness status. Poster Presentation, Sanford Health "It's All About Science Festival", June 2013.

Exercise is Medicine. South Dakota Association for the Blind. September 2013.

Effects of quercetin supplementation on performance and oxidative stress measures in endurance runners. Poster Presentation, ACSM's 59th Annual Meeting, San Francisco, CA. 1 June 2012.

Dietary flavonoid quercetin has no effect on endurance capacity and antioxidant status in long distance runners. Thematic Poster Session: ACSM's 57th Annual Meeting, Baltimore, MD. 3 June 2010.

Nutrition and fitness considerations for child care providers, Pella, IA and Knoxville, IA daycare providers. June 2006 & 2007.

FIT PE. Provided continuing education credits to Des Moines area Physical Education teachers, June 2007.

Publications:

Peer Reviewed

Barkley, S.A., Scholten, S.D. Effects of ischemic preconditioning on max effort 200-yd swim in competitive female swimmers. Under review at *Open Access J Sports Med.*

Daum, H. & Scholten SD. Academic Achievement Among NCAA Division 2 Student-Athletes and Non-Athletes. Under review at *Sport Educ Soc.*

Erickson, S., Pandorf, Z., Scholten, S.D. Ischemic Preconditioning on Swimming Performance: An Exploration into Practical Application. *Top Ex Sci Kines*; 2023;4(1):546-559.

Lillquist, T., Hackney K., Scholten, S.D. The Effect of Direct and Remote Post-Exercise Ischemic Conditioning on Muscle Soreness and Strength 24 hr Following Eccentric Drop Jumps. *J Strength Cond Res*; 2023;37(9):1870-1876.

Nelson, C.R., Brand, C.R., Chitty, M.R., Birger, C.B., Scholten, S.D. The Acute Effects of Ischemic Preconditioning on Short-Duration Cycling: A Randomized Crossover Study. *Int J Ex Sci.* 2022; 16(6):148-158.
Lindner, T.D, Scholten, S.D., Halverson, J.M., Baumgarten, K.M., Birger, C.B., Nowotny, B.G. The acute effects of ischemic preconditioning on sprint and power performance. *SD Med*. 2021; 74(5):210-219.

Ferley, D.D., Scholten, S.D., Vukovich M.D. Combined Sprint Interval, Plyometric, and Strength Training in Adolescent Soccer Players: Effects on Measures of Speed, Strength, Power, Change of Direction, and Anaerobic Capacity. *J Strength Cond Res*. 2020; 34(4):957-968.

Scholten SD, Ferley DD, Birger CB, Dowling C, Mikkelson M, Springer J, Lucs N. Physical performance is not improved with vitamin D repletion: a randomized trial. *J Sports Med Phys Fitness.* 2020 Jan;60(1):85-91.

Scholten, S.D., I.N. Sergeev, Q. Song, C.B Birger. Effects of vitamin D and quercetin, alone and in combination, on cardiorespiratory fitness and muscle function in physically active male adults. *Open Access J Sports Med.* 2015; 24:6,229-39.

Scholten, S.D. and Sergeev, I.N. Vitamin D and physical performance in athletes. *Immun Endoc & Metab Agents in Med Chem.* 2014; 14:152-161.

Scholten, S.D. and Sergeev, I.N. Long term quercetin supplementation reduces lipid peroxidation but does not improve performance in endurance runners. *Open Access J Sports Med*. 2013; 4:53-61.

Hreljac, A., Stergiou, N., Scholten, S.D. Joint kinetics of the ankle and knee when running over obstacles. *J Sports Med Phys Fitness*. 2005; 45(4):476-482.

Scholten, S.D., Stergiou, N., Houser, J., Blanke, D., and Alberts, L.R. Foot strike patterns after obstacle clearance during running. *Med Sci Sports Exerc.* 2002; 34:123-129.

Stergiou, N., Jensen, J.L., Bates, B.T., Scholten, S.D., Tzetzis, G. A dynamical systems investigation of lower extremity coordination during running over obstacles. *Clin Biomech*. 2001; 16(3):213-221.

Stergiou, N., Scholten, S.D., Jensen, J.L., Blanke, D. Intralimb coordination following obstacle clearance during running: the effect of obstacle height. *Gait & Posture*. 2001; 13(3):210-220.

Houser, J., Stergiou, N., Scholten, S., Noble, J., Tzetzis, G. Study of obstructed locomotion: implications for the elderly and sports. *Exerc & Soc*. 1998; 20:204.

Published Abstracts

Brand, C.R., Munce, T.A., Scholten, S.D. Correlations Between Subjective and Objective Wellness Measures: An Observational Study with Cross Country Runners. *Med Sci Sports Exerc,* 2023; 55(9S):105-106.

Pandorf, Z., Erickson, S., Scholten, SD. The Impact of Ischemic Preconditioning (IPC) on Swimming: A Randomized Crossover Study. *Med Sci Sports Exerc,* 2023; 55(9S):377.

Scholten, SD, Mikkelson, M, Springer, J, Dowling, C, Lucs, N. Physical Performance is not Improved with Vitamin D Repletion. *Med Sci Sports Exerc,* 2018; 50(5S).

Mikkelson, M., Dowling, C., Springer, J., Scholten, SD. Effect of Vitamin D Repletion on Anaerobic Performance in Physically Active Adults. *Black Hills Research Symposium*. 2018.

Kirsten K. Townley, Emily A. Johnson, Shane D. Scholten, Chad B. Birger, Igor N. Sergeev. Association between vitamin D status and physical performance in young adult females. *FASEB J*. 2014; 28(1):634.4

Scholten, SD, Birger, CB, Song, Q, Townley, KK, Sergeev, IN. Vitamin D supplementation has no effect on muscular function in vitamin D sufficient adults. *Med Sci Sports Exerc,* 2014; 46(5S):474.

Scholten, SD, Overweg, TA, Schenavar BM, Sergeev IN. 25(OH)D does not correlate with

BMI or cardiovascular fitness in young adults with sufficient vitamin D status. *FASEB J.* 2013; 27:632.5.

Scholten, SD, Madsen, BJ, Overweg, TA, Sergeev IN. Effects of quercetin supplementation on performance and oxidative stress measures in endurance runners. *Med Sci Sports Exerc,* 2012; 44(5S):215.

Scholten, SD, Moen, J, Schnabel, S, and Sergeev, IN. Dietary flavonoid quercetin has no effect on endurance capacity and antioxidant status in long distance runners. *FASEB J.* 2011; 25: 773.11.

Scholten, S.D., Stergiou, N., Houser, J. Footstrike patterns during running over obstacles of different heights. *23rd Annual Meeting, Amer Soc of Biomech.* 1999;220-221.

Manuscript Reviews:

Reviews dated 2012-June 2024 [Journal Title (quantity])
Advances in Physiology Education (3)
Archives of Physical Medicine and Rehab (1)
Biology of Sport (1)
Clinical Biomechanics (4)
Clinical Nutrition ESPEN (4)
Frontiers (3)
International Journal of Basic and Clinical Endocrinology (1)
International Journal of Exercise Science (9)
International Journal of Vitamins and Minerals (1)
Journal of Applied Biomechanics (1)
Journal of Sport Sciences (1)
Journal of Strength and Conditioning Research (8)
Medicine and Science in Sport and Exercise (1)
University of Nebraska at Omaha extramural funding (2)

Research Interests:

Primary interest is to study the effects of IPC on measures of physical performance.

Skills & Qualifications

- Public speaking related to cardiovascular disease, health & fitness, exercise science ● American College of Sports Medicine Certified Exercise Physiologist
- Certified Wellness Coach
- Certified Learning Management System Basics and Instructional Design ● Learning Management Systems: Canvas, Moodle, Jenzabar
- Microsoft Office & Google Suite
- Dartfish and OnForm video analysis
- Exercise equipment repair

Volunteer/Leadership Positions

● Past President for the Northland American College of Sports Medicine, 2024-2025 ● President for the Northland American College of Sports Medicine, 2023-2024 ● President Elect for the Northland American College of Sports Medicine, 2022-2023 ● Review Editor for Frontiers, Exercise Physiology section, 2023-current ● South Dakota BRIN mentor for undergraduate student research, 2009-current ● South Dakota Representative for the Northland American College of Sports Medicine region, 2018-2022

● Faculty Representative for Augustana's Men's Cross Country and Track Teams, 2022-2024

● Elected member of the Augustana University Co-Curriculum Council from 2015-2022 and Chair from 2018-2020.

● Elected member of the Augustana University Personnel, Tenure, and Leave Committee, 2023-2024.

● Fitness testing for various athletic teams at Augustana University, 2014-2024 ● Volunteer track coach at Sioux Falls Christian High School, 2016-2021 ● South Dakota National Strength and Conditioning Association Advisory Board Member, 2017 – 2023

● Augustana University Institutional Review Board, 2015-16

● Central Plains Cycling President, 2016-2017

● National FCA Endurance Advisory Board member, 2016-17

Anthony Drealan

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Education

M.A., Human Performance and Physical Education – Emphasis in Coaching
Adam's State University, Alamosa, CO – June 2013
B.S., Major: Business Education, Minor: Computer Education
Dakota State University, Madison, SD – May 2011

Professional Experience

Dakota State University, Madison, SD
Head Track and Field Coach – June 2014 – Present
Head Cross Country Coach – May 2013 – Present
Distance Coach – August 2011 to May 2013

Dakota State University, Madison, SD
College of Education Instructor – August 2013 to Present

Courses Taught: WEL-100 – Wellness for Life
PE-453 – Sport Psychology
PE-473 – Coaching Cross Country and Track

Professional Association Memberships

South Dakota High School Coaches Association
National Association of Intercollegiate Athletic Coaches
NAIA National Cross Country Coaches Association
NAIA National Track and Field Coaches Association
USA Track and Field Member
USATF Level 1 Coach

Committees Served

Dakota State University Athletic Hall of Fame – June 2013 to Present
Dakota State University Student Admissions Committee – August 2014 to Present
NSAA Cross Country Conference Sport Chair – August 2017 to July 2020
NSAA/NAIA Cross Country Rater
Women's Rater – 2015
Men's Rater – 2016
Men's and Women's Rater – 2017 to 2019
Women's Rater - 2020

STACY ANDERSON

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Madison, SD 57042
Stacy.l.anderson@k12.sd.us
(605)291-6252

EDUCATION

MAY 2016
MASTERS, NORTHERN STATE UNIVERSITY
Teaching and Learning

MAY 2016
WORKED TOWARDS MASTERS, WAYNE STATE COLLEGE
Exercise Science
Completed 25 graduate credits

MAY OF 2000
BACHELORS, DAKOTA WESLEYAN UNIVERSITY

Major:
K-12 Physical Education
Athletic training

Minor:
Secondary Education

Endorsements:
General Science
Biology

EXPERIENCE

2018-PRESENT
INSTRUCTOR, DAKOTA STATE UNIVERSITY
College of Education

- Develop and instruct courses in the Physical Education and Exercise Science Departments both in person and online platforms.
- Courses: Wellness for Life, Personal Fitness, Health Concepts, Foundations of Hyper, Adapted Physical Education, Curriculum Development and Evaluation, Fundamentals and Theories of Coaching and Practicum, Secondary and Middle Level PE Content, K-12 Methods of Health Instruction, Prevention and Care of Athletic Injuries and several PE Activity Courses.
- Advise student in all areas of their degree completion plans. Areas include PE, ELED/SPED, and EXERCISE SCIENCE.
- University supervisor for student teachers in the COE in the content areas of Physical Education, Elementary Education and Special Education.
- Developed the exercise science handbook in conjunction with exercise science faculty.
- Participated in ongoing learning opportunities such as lunch and learns, teach camps, discovery days, gencyber camps.
- Member on hiring committees within the COE and Athletic Departments

- Participated in updating and developing new curriculums and majors within the COE and Exercise Science.

Faculty Athletic Representative

- Responsible for working with the compliance team to assure athletic eligibility of 500+ athletes.
- Advocating for student athletes with NAIA rule exceptions.
- Bridging the gap between faculty and student athlete relationships.

2013 – 2018

TEACHER, MADISON CENTRAL SCHOOL DISTRICT

Physical Education Teacher

- Created curriculum and implemented daily lesson plans for all students in 6th, 7th and 8th grades.
- Calculate grades for over 250 students on a daily basis through Infinite Campus Online Program.
- Communicated with colleagues, parents and students through the SD state webmail, phone conversations and notecards on a regular basis.
- Handled all equipment budgets, orders and maintenance for the middle school physical education department.
- Developed and supervise a morning activity period prior to school in conjunction with the student council students.
- Mentored DSU student teachers, Level III DSU students and entry level education major students every year. Responsible for communicating with supervising instructor, evaluating student teachers throughout the semester and writing letters of recommendation.
- Presented at MCSD, West Central Symposium In-service and SHAPESD.
- Middle School Teacher of the Year 2016, SHAPESD.

Transition Cruise Class Teacher

- Created curriculum and implemented daily lesson plans for all 8th grade students using different forms of technology including flip grids.
- Responsible for advising students with information on transitioning into the high school with the intent for them to be successful.
- Responsible for advising students on the requirements for graduation from high school to better prepare them for class selection according to their specific career cluster.
- Organized with the high school teachers to take tours through specific areas of the buildings.
- Worked in conjunction with several high school teachers and counselors to help create a class fair to better educate the students about different class opportunities at the high school.
- Prior to leaving this class all 8th grade students have completed their freshman year registration.

Committee/Team Responsibilities

- Member of the District Wellness Committee
- Part of the 6th grade teaching team.

Head Girls Basketball Coach

- Created and implemented practices throughout the season.
- Supervised players on away games and overnight trips.
- Created and carried out camps for elementary to middle school age girls.

Middle School Track Coach

- Worked with other coaches to run a middle school track program for 90 plus athletes.

SUMMER 2017 – CURRENT

ACTIVITIES COORDINATOR, GENCYBHER CAMP, DAKOTA STATE UNIVERSITY

- Created and organized activities for 100+ campers during the evenings.
- Hired and supervised camp mentors.

2006 – 2009

TEACHER, PAYSON UNIFIED SCHOOL DISTRICT

Physical Education Teacher

- Created curriculum and implemented daily lesson plans for 9th grade girls.
- Created and implemented weight programs for 9-12th grade girls.
- Communicated with colleagues, parents and students on a regular basis through various forms of communication.
- Department head from 2008-2009.

Head Girls Basketball Coach

- Created and implemented practices throughout the season.
- Supervised players on away games and overnight trips.

Athletic Trainer

- Care and prevention of all athletic injuries for HS sports throughout the year.
- Created and implemented a student athletic training program.

2004-2006

TEACHER, PRESCOTT UNIFIED SCHOOL DISTRICT

Physical Education Teacher

- Created curriculum and implemented daily lesson plans for 6th, 7th and 8th grade girls.
- Communicated with colleagues, parents and students on a regular basis through various forms of communication.

Student Responsibility Training (SRT) Instructor

- Obtained Certification in SRT.
- Created and implemented successful classes for middle school students.

2003-2004

TEACHER, CHINO VALLEY UNIFIED SCHOOL DISTRICT

High School Biology and Anatomy/Physiology Teacher

- Created curriculum and implemented daily lesson plans, hands on laboratory activities (dissections), written/skills test and assessment of daily grades.

2001-2003

TEACHER, DEUEL SCHOOL DISTRICT

Middle School Science Teacher

- Teaching responsibilities included Life Science, Earth Science and Physical Science.
- Created curriculum and implemented daily lesson plans, hands on laboratory activities (dissections), written/skills test and assessment of daily grades.

2000-2001

GRADUATE ASSISTANT, WAYNE STATE COLLEGE

Instructor/Athletic Trainer

- Instructor for Prevention and Care of Athletic Injuries. Developed syllabus, lesson plans, laboratory activities, written/skill test and assessments of daily grades.
- Provided athletic training services for the collegiate athletic teams. Provided first aid, evaluated injuries, designed and implemented rehabilitation programs, administered treatments.
- Supervised and created schedules for student athletic training students.
- Held study sessions to improve student athletic training success rate.

RELATED EXPERIENCES

- SHAPE SD Organization Board Member
- Organized and Ran 5th grade Orientation Day
- Helping with summer softball and baseball programs
- Special Olympics Volunteer
- Living Hope Wesleyan Church Children Ministries Volunteer

Scott T. Staiger, Ph.D., CSCS,*D

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Academic Appointments

Dakota State University — Madison, SD
Associate Professor – Exercise Science (Promoted & Tenured Spring '16) — 2016-Present
Assistant Professor – Exercise Science — 2010-2016

Classes taught:

- Biomechanics
- Exercise Physiology (including Lab)
- Exercise Testing and Prescription
- Introduction to Exercise Science
- Introduction to Research
- Nutrition
- Theory of Strength Training & Conditioning
- Practicum
- Senior Seminar
- Topics – CSCS exam prep, Sports Nutrition
- Soccer
- Personal Fitness

Oklahoma City University — Oklahoma City, OK
Visiting Assistant Professor – Kinesiology and Exercise Science — 2009-2010

Classes taught:

- Capstone
- Exercise for Special Populations
- Fitness Testing and Exercise Prescription
- Nutrition
- Physiological Basis of Human Performance
- Physiology of Exercise
- Wellness

Huntingdon College — Montgomery, AL
Assistant Professor – Human Development — 2007-2009

Classes taught:

- Fitness Assessment and Exercise Prescription
- Foundations of Physical Education
- Human Wellness and Lifetime Fitness
- Introduction to Community Health
- Introduction to Individual Sports
- Introduction to Team Sports
- Kinesiology
- Nutrition and Exercise
- Physiology of Exercise
- Seminar – CSCS exam preparation
- Training and Conditioning for Performance

Academic Appointments cont.

North Dakota State University — Fargo, ND
Graduate Teaching Assistant — 2004-2007

Classes taught:

Biomechanics Lab	Exercise Physiology Lab
Concepts of Fitness & Wellness	Principles of Conditioning

University of North Dakota — Grand Forks, ND
Graduate Teaching Assistant — 1997-1999

Classes taught:

Biomechanics Lab	Introduction to Coaching
Coaching Soccer	Physical Conditioning
Exercise Physiology Lab	Walking

Related Professional Experience

Madison Community Center — Madison, SD
Personal Trainer — 2013-present

Dakota State University – Women's Volleyball — Madison, SD
Volunteer Strength Coach — Summer 2013

Sports Center — Fargo, ND
Personal Training Director — 2001-2007
Personal Trainer — 1996-1997

Fargo South High School — Fargo, ND
Assistant Boys' Varsity Soccer Coach — 2002-2007

Education

North Dakota State University — Fargo, ND
Human Development and Education, Ph.D. — August 2007
Wellness, emphasis

University of North Dakota — Grand Forks, ND
Kinesiology, M.S. — August 2000
Exercise Physiology, emphasis

North Dakota State University — Fargo, ND
Corporate and Community Fitness, B.S. — December 1994
Coaching, minor

Additional Training

Online Learning Academy — Summer 2020
Dakota State University, Madison, SD

CSC – 209 – Advanced Applications – Statistical Analysis System — Spring 2013
Dakota State University, Madison, SD

Internal Grants

Dakota State University – Faculty Research Initiative — 2014-2015
($2000 – funded)

Dakota State University – Faculty Research Initiative — 2011-2012
($2000 – funded)

Abstracts

Staiger, S. T., & Wahl, E. T. (2018). Comparison of 3 alternative systems for measuring vertical jump height. *Medicine and Science in Sports and Exercise, 50*(5), S409.

Staiger, S. T., & Terbizan, D. J. (2008). The effect of physical activity on weight loss in college students. *Medicine and Science in Sports and Exercise, 40*(5), S172.

Staiger, S. T., & Terbizan, D. J. (2007). Comparison of soccer referee physical fitness assessments. *Medicine and Science in Sports and Exercise, 39*(5), S217.

Terbizan, D. J., **Staiger, S. T.**, DeBlauw, C., Rhee, Y., & Driscoll, S. (2005). Body composition measurement in college-age students. *Medicine and Science in Sports and Exercise, 37*(5), S303.

Staiger, S. T., & Von Duvillard, S. P. (2000). Energy cost of three maximal testing modes in recreational ice hockey players. *Medicine and Science in Sports and Exercise 32*(5), S221.

Smith, T., **Staiger, S. T.**, Brinkert, R., & Von Duvillard, S. P. (1999). Wingate tests - the effect of active vs. passive recovery. *Medicine and Science in Sports and Exercise, 31*(5), S113.

Von Duvillard, S. P., Smith, T., **Staiger, S. T.**, Pokan, R., Hofmann, P., & Brinkert, R. H. (1998). *The effect of active vs. passive recovery resulting from five consecutive Wingate Tests on selected respiratory variables and biochemical markers.* International Congress of the European College of Sport Science. Manchester, England, July 18-21, 1998.

Non-refereed Publications

Staiger, S. T. (2013). Exercise: For the health of it. *The Competitive Edge Network.* http://www.thecompetitiveedgenetwork.com/3/post/2013/05/-exercise-for-the-health-of-it-by-scott-staiger-phd.html

Staiger, S. T. (2011). Soccer Pre-game Warm-up. *National Intercollegiate Soccer Officials Association Newsletter, 35*(1), 3.

Research Posters – External

Staiger, S. T. (2018). *Anthropometric measures of professional and collegiate ice hockey players.*
National Strength and Conditioning Association – National Conference
Indianapolis, IN.

Staiger, S. T., & Wahl, E. T. (2018). *Comparison of 3 alternative systems for measuring vertical jump.*
American College of Sports Medicine – Annual Conference
Minneapolis, MN

Hausmann, C., **Staiger, S. T.**, & Lamb, K. E. (2016). *Factors affecting NFL career length.*
Northland American College of Sports Medicine – Spring Tutorial
St. Paul, MN.

Staiger, S. T. (2015). *The effects of shoe heel height on vertical jump performance.*
National Strength and Conditioning Association – National Conference
Orlando, FL.

Welbon, C. C., Carlson, S. D., Spears, S. D., & **Staiger, S. T.** (2015). *Hot and Cold-Water Effects on Vertical Jump.*
Northland American College of Sports Medicine – Spring Tutorial
St. Cloud, MN.

Lansink, A., **Staiger, S.**, & Pheneger, A. (2011). *Physical self-perception of fitness in college students.*
Northland American College of Sports Medicine – Spring Tutorial
St. Cloud, MN.

Staiger, S. (2009). *Comparison of distances covered by a soccer referee during high school and college matches.*
National Strength and Conditioning Association – National Conference
Las Vegas, NV.

Research Posters – Internal

Hausmann, C., & Lamb, K. E. (Faculty advisor – **Staiger, S.**) *Factors affecting NFL career length*
Dakota State University – 2016 Research Day
Madison, SD.

Staiger, S. *The effects of shoe heel height on vertical jump performance.*
Dakota State University – 2015 Research Day
Madison, SD.

Flahie, D., & Irvine, S. (Faculty advisor – **Staiger, S.**) *Sports specialization in high school athletes*
Dakota State University – 2015 Research Day
Madison, SD.

Staiger, S. *Anthropometric and dietary differences between college-aged diet and non-diet soft drink consumers*
Dakota State University – 2012 Research Day
Madison, SD.

Presentations

South Dakota Soccer Association– Advanced Referee Training Clinic — Fall 2014
Title – Nutrition for soccer referees

Service to the Profession

South Dakota Advisory BoardMember — 2013 – 2016
National Strength & Conditioning Association

Reviewer – *International Journal of Exercise Science* — 2009 – Present

Service to the University

University Code of Conduct Board (Dakota State University)	2016 – present
Faculty Advisor – Soccer Club (Dakota State University)	2014 – present
Research Committee (Dakota State University)	2013 – 2017
Curriculum Committee (Dakota State University)	2012 – present
Athletic Committee (Dakota State University)	2010 – 2019
Discipline Council (Dakota State University Representative)	2010 – present
Faculty Advisor – Exercise Science Club (Dakota State University)	2010 – 2020

Writing Intensive Committee (Dakota State University)	2010 – 2017

Service to the Community

Madison High School – Girls Tennis – Volunteer coach	2014 – 2019
Madison Community Center – Board Member	2014 – 2016
Soccer Madison – Volunteer coach	2014 – 2015

Professional Memberships

American College of Sports Medicine	1997 – present
National Strength & Conditioning Association	1997 – present
Northland Chapter of the American College of Sports Medicine	2010 – present
Central States Chapter of the American College of Sports Medicine	2009 – 2010
Southeast Chapter of the American College of Sports Medicine	2007 – 2009

Certifications

Certified Strength & Conditioning Specialist	1998 – present
National Strength & Conditioning Association	

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kari.hall@dsu.edu

KARI HALL

EXPERIENCE

Instructor | August 2015 - Present | Dakota State University

Courses teaching:

- ExS 401 Clinical Exercise Physiology (5 semesters)
- ExS 454 Biomechanics (5 semesters)
- ExS 452 Motor Development (5 semesters)
- ExS 492 Topics (2 semesters)
- ExS 353 Kinesiology (5 semesters)
- ExS 335 Administration in Exercise Science (4 semesters)
- PE 354 Prevention & Care of Athletic Injuries (9 semesters)
- PE 352 Adapted Physical Education (3 semesters)
- ExS/PE 180 Foundations of HPER (10 semesters)

Additional courses previously taught:

- HLTH 201 ATOD Prevention (1 semester)
- HLTH 370 Stress Management (1 semester)

Other:

- Service to the university and community through volunteering, committee service, and recruitment
- Equity, Diversity, and Inclusion Committee 2016-present
- LEAD South Dakota Board Director 2018-present
- Academic Adviser 2016-present
- BOC Certified Athletic Trainer 2010-present
- Student Research Mentor 2019-2020
- Athletics Committee Member (General Faculty) 2019-2020

Service Coordinator | Feb 2013- Aug 2014 | LifeScape

Provided case management and leadership to support people with disabilities to achieve personal outcomes as a result of ongoing development, coordination, and implementation of an Individual Service Plan.

Lead Support Professional | April 2012- Feb 2014 | LifeScape

Acted as Lead Instructor for the Traumatic Brain Injury program which facilitates approximately 12 individuals who live with Traumatic Brain Injury.

Responsible for curriculum development, coordination, staff supervision, and educational outcomes for people supported by the program.

Certified Athletic Trainer | Sept 2010 – Dec 2012 | Hawai'i Pacific University

Provided coverage as a Certified Athletic Trainer to the HPU athletics teams (softball, volleyball, basketball). Scope of practice and services encompassed injury/illness prevention & wellness protection, clinical evaluation and diagnosis of injuries/illnesses, immediate and emergency care, treatment, rehabilitation, organizational and professional health & well-being.

EDUCATION

Ph.D. Student Health & Human Performance | Jan 2018 – Present

Concordia University – Chicago

Chicago, IL

M.A. Communication | Sept 2010 - Dec 2012

Hawai'i Pacific University

Honolulu, HI

- Certification in Mediation & Conflict Resolution

B.A. Athletic Training | Sept 2006 – May 2009

Augustana University

Sioux Falls, SD

Samantha Drealan, M.S. OTR/L

Contact

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Madison, SD 57042
(605) 830-0242
Samantha.Drealan@gmail.com

Education

University of South Dakota
Vermillion, SD
M.S. Occupational Therapy
GPA 3.734

Dakota State University
Madison, SD
B.S. Exercise Science
GPA 3.819

Key Skills

Patient Evaluations
Documentation Skills
Direct Patient Care
Progress Evaluations
Discharge Planning
Interdisciplinary Collaboration
Resource Utilization
Workflow Planning
Goal Setting Proficiency
Patient Positioning

Summary

Background includes working with patients across the lifespan to improve quality of life and life skills. Knowledgeable and dedicated to improving patient outcomes. Highly-motivated person with desire to take on new challenges. Strong work ethic, adaptability, and exceptional interpersonal skills. Adept at working effectively unsupervised and quickly mastering new skills.

Experience

August 2018 - Current
Occupational Therapist, Part-Time • Brookings Health System

April 2018 - Current
Owner, Certified Personal Trainer • Training for Life, LLC

May 2018 – Dec 2020
Occupational Therapist, PRN • Aegis Therapies, Goodcare Rehab

March 2017 – May 2018
Occupational Therapist, Director of Rehab • New Horizons East

February 2014 – March 2017
Occupational Therapist • Aegis Therapies

August 2015 – December 2015
Adjunct Professor • Dakota State University

Certifications

South Dakota Licensed, NBCOT Certified, NASM CPT (expired in 2022), Senior Fitness Specialist, Nutrition Specialist, AHA CPR/AED

Continuing Education

Dementia Training, Diabetes Management, Therapeutic Exercise for Older Adults, Functional Testing & Skilled Documentation in Geriatric Therapy, Complex Disease Management, Comprehensive Approach to Aging Confidently: Geriatric Posture, Core, and Balance, Seating and Positioning, Sensory Integration, Falls and Balance, Lymphedema, Vision and Dizziness

References

Available upon request.