EXERCISE SCIENCE, B.S.

College of Education & Human Performance
Dakota State University

Site Visit Date: April 30, 2025

Report Prepared by:
Andrea Powell PhD, CSCS, CAFS
Assistant Professor
Program Director, Exercise & Sport Sciences
Augustana University | Sioux Falls, SD

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Part 1. Executive Summary of Findings

As a "special focus" STEM University within the SDBOR system, the mission of Dakota State University is to prepare cyber-savvy graduates who are lifelong learners, problem solvers, innovators, and leaders who live lives of positive purpose and consequence. The Exercise Science (EXS) program aligns well with this mission, but as a healthcare-related program, is different than the other cyber and tech-focused majors at the institution. However, the STEM focus of DSU can be advantageous to EXS to differentiate the program from others in the SDBOR system.

EXS has made great strides since the last program review. Progress includes the introduction of the Strength and Conditioning minor, a revised curriculum, and continued partnerships with local healthcare systems. Moving forward, EXS can focus on 4 main areas; assessment, accreditation, completing the biomechanics lab, and pursuing a Master's in Biomechanics. For assessment, program goals could be clearer and more measurable to bring more meaning to the assessment process. The program is in a good place to aim for accreditation through the Council on Accreditation for Strength & Conditioning Education (CASCE). Completing and equipping the biomechanics lab will be a huge strength for the program and institution. Assuming success with the Biomechanics specialization within the Masters of AI program, developing a standalone Masters in Biomechanics would be an incredible feat. Strategic staffing to support new programs will also be necessary. The progress the EXS program has made over the last few years is very impressive; keep growing and pushing the bar higher.

Part 2. Schedule of On-Site Visit

Date: Wednesday April 30, 2025

9:30-10:00 a.m. Meeting with Dr. Hoey: Heston Hall 309

10:00-10:30 a.m. Meeting with Dr. Jeanette McGreevy: Heston Hall 309C

10:30-11:00 a.m. Facilities Tour with Dr. Scholten

11:00-11:30 a.m. Meet with Dr. DeJong: Kennedy Center Office

11:45-12:45 p.m. Pizza & meet with EXS Students in Kennedy Center: Kennedy Center 123

1:00-2:00 p.m. Meet with EXS faculty: Kennedy Center 123

2:00 - 2:30 p.m. Meet with Dr. Hoey, Dr. DeJong and Dr. Klungseth: Heston Hall 309

Part 3. Program Evaluation

Program goals and strategic planning

The Exercise Science (EXS) department goals align well with DSU's mission of producing cyber-savvy, innovative, and lifelong learners. EXS emphasizes integration of technology and evidence-based practice to enhance academic rigor and professional preparation. The program reflects national and global trends, including data-driven fitness, AI integration, inclusivity, mental health, and virtual coaching. DSU uniquely leverages tech and data science in line with current exercise science developments. The job outlook and salary statistics for Exercise Physiologists is in the table below. Notably, this industry will continue to grow at a much faster rate than average. Most students at DSU are interested in entering the workforce immediately upon graduation, therefore, these statistics are important to know. The EXS program is in a great position to adequately prepare students and continually have high job placement rates.

Quick Facts: Exercise Physiologists	
2024 Median Pay	$58,160 per year $27.96 per hour
Typical Entry-Level Education	Bachelor's degree
Work Experience in a Related Occupation	None
On-the-job Training	None
Number of Jobs, 2023	21,500
Job Outlook, 2023-33	10% (Much faster than average)
Employment Change, 2023-33	2,200

https://www.bls.gov/ooh/healthcare/exercise-physiologists.htm

Program resources

Current resources have been effectively used to align curriculum and student experience with strategic goals (e.g., integrating biomechanics, adding lab space). However, equipment for the new biomechanics lab is a major financial need. Adding the biomechanics lab will greatly enhance the Biomechanics class experience and provide unique hands-on learning. The current lab space is modest, yet, faculty seem to be creative with how to best use the space. Facilitating a more robust partnership with DSU Athletics to utilize the new weight room space would also provide great learning opportunities within Theory of Strength & Conditioning and Field Experience. This partnership could be mutually beneficial, with students working as strength coaches during their field experiences.

Faculty are well-qualified with terminal degrees and professional certifications. There are 2 full-time faculty that exclusively teach in EXS and 2 that teach in EXS and other areas, namely, Physical Education. This staffing does not seem to be sufficient for a couple of reasons. First, the addition of the Chair of Human Performance comes with some teaching release time. Second, faculty have been teaching overload for a number of years. To decrease the burden of overload and support administrative appointments, there is a

need for additional faculty. Lastly, if the program continues to grow, at the undergraduate and/or graduate levels, additional faculty will be essential to the success of the program.

Funding has been responsive to program needs. The main current need is funding for new faculty positions and biomechanics lab equipment.

Program curriculum

The EXS curriculum aligns with other SDBOR and area programs, covering the main areas of exercise physiology, kinesiology, biomechanics, and strength & conditioning theory. There are a number of electives students can take based on their interests, such as motor development, prevention and care of athletic injuries, or sport psychology. The ability to structure elective courses to the student's professional goals is a strength of the program.

There has been a re-structuring of practical experiences within the EXS major, with the removal of EXS 295 and EXS 395. There is still EXS 494, which is a variable credit internship, requiring 50 contact hours per credit. It is logical to focus on one practical experience that is variable and repeatable, rather than having 3 separate "courses" for practical experiences.

Technology integration

Technology is a program differentiator at DSU. Wearables, motion analysis, virtual training, and data analytics are embedded in courses. Students use tech in assessments, case studies, and field experiences. There is potential for expanding even further into AI and Biomechanics upon completion of the lab.

Program Assessment

The assessment plan outlined in the self-study document left many questions and seemed incomplete. Meeting with Dr. McGreevy during the site visit eased many concerns. The faculty are working on revising the program learning outcomes and creating a more cohesive curriculum map with the help of Dr. McGreevy. Finalizing the curriculum map and aligning course learning outcomes with programmatic outcomes will be a great asset to the program and provide meaningful feedback. Assessment is always evolving and changing, but starting with clear PLOs and a cohesive map should provide an excellent starting point. Previous assessment strategies focused on exams, course grades, and GPA, which likely does not fully reflect competency. It is recommended to use more action-oriented assessments such as projects, presentations, discussions, case studies, and/or reflective essays. A meaningful and comprehensive assessment plan will also be extremely beneficial when pursuing CASCE accreditation.

Student Support / Student Enrollment

Enrollment has steadily grown with a 3-year average headcount of 63. Retention rates have been improving over the last few years and persistence is strong. Graduation rates are a bit concerning (4-year: 11–22%, 6-year: up to 36%). Placement rates are high (98%), with 100% grad school acceptance for those pursuing it, though only 5–10% pursue graduate education. With new faculty and increased student support (i.e., Human Performance Club, advising), hopefully these numbers continue to improve. Some variables

are inevitable, such as a student-athletes transferring out due to athletic reasons, but it is still important to continue to focus on student support and engagement.

For advising, students start with a professional advisor, then transition to faculty, which is a strength of the program. Career interests are diverse: physical therapy, occupational therapy, strength & conditioning, and wellness coaching.

Faculty collaborate well with admissions and athletics on enrollment and retention strategies. There is opportunity to formalize outreach, market the program better, and potentially create an advisory board of relevant stakeholders. The student club has been rebranded to the Human Performance Club, which enhances student support and engagement. There is also an interest in getting students more involved with faculty for research, especially through programs such as South Dakota BRIN.

Program strengths and areas for improvement

Strengths:

- Integration of technology and AI.
- High job/graduate school placement.
- Experienced faculty with strong research and engagement.
- Responsive curriculum revision with development of a minor.
- New lab facilities and funding support.

Areas for Improvement:

- Update and clarify PLOs; link to curriculum and assessment.
- Formalize assessment using more meaningful tools.
- Strengthen student engagement and graduation rates.
- Increase faculty to support program growth and specialization.

Part 4. Recommendations for Change

There are four main areas to focus on over the next few years; assessment, accreditation, biomechanics lab completion, and creating a Master's degree. Each are addressed individually below.

Assessment

The EXS program is well on its way to creating a more cohesive, comprehensive, and meaningful assessment plan. Keep working to complete the curriculum map with the current courses by focusing on succinct program and course learning objectives. It would be worth considering a cross-sectional assessment plan to get a better grasp on how students are doing on 2-4 objectives across levels (i.e., introductory to mastery), rather than a linear assessment plan. This will allow the faculty to be more responsive to any needs or gaps in the curriculum.

CASCE Accreditation

With the majority of EXS students pursuing work immediately upon graduation, it is imperative the program prepare students for a professional certification. The two most prominent certifications being the Certified Strength and Conditioning Specialist (CSCS) certification through the National Strength and Conditioning Association or the American College of Sports Medicine – Exercise Physiologist certification. The CSCS can be more versatile, allowing students to pursue strength and conditioning coaching in the high school, college, or private sectors, as well as personal training. Beginning in 2030, students who want to sit for the CSCS exam will need to graduate from a CASCE-accredited program. The CSCS is the 'gold standard' for strength and conditioning professionals, therefore, a relevant and important certification for students. The program is well-equipped to start this process. Support from academic affairs will be important for this process. Faculty will also need current CSCS certification to make this feasible.

Biomechanics Lab

There is an incredible space earmarked for a biomechanics lab and well-prepared biomechanists on faculty. Completing the biomechanics lab is key to continue to support the research agendas of these faculty and more fully integrate technology and AI into the classroom. This is an area that is a logical connection with the focus on STEM at DSU. It is also something that can set DSU apart from other area institutions, especially at the Master's degree level.

Biomechanics Master's Degree & Staffing Strategy

There has been recent approval for a specialization in Biomechanics within the MSAI program. Eventually, moving the specialization into a standalone Master's in Biomechanics would be a huge asset to DSU, SDBOR, and the local area. With additional programs, comes the need for additional faculty and a strategic staffing plan. At least 1 new faculty is warranted to fully support the newly approved specialization with an additional 1-2 new faculty to support a Master's program. New faculty positions could cover the undergraduate coursework, with current faculty fulfilling new program needs.