SOUTH DAKOTA BOARD OF REGENTS

Academic and Student Affairs
Consent

AGENDA ITEM: 5 – A (3)
DATE: April 2-3, 2025

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SUBJECT

New Program Request – NSU – MS in Sports Sciences

CONTROLLING STATUTE, RULE, OR POLICY

BOR Policy 2.3.2 – New Programs, Program Modifications, and Inactivation/Termination

BACKGROUND / DISCUSSION

Northern State University (NSU) requests authorization to offer an MS in Sports Sciences. The proposed program provides a flexible and dynamic educational experience by offering students the choice of two specializations: Biomechanics & Exercise Physiology and Strength & Conditioning. These tailored options align with emerging trends in the sports industry and with standards set forth by national accrediting bodies in Sports Sciences. This approach empowers students to customize their education, ensuring alignment with their unique interests and career aspirations. This program is an excellent option for students interested in health, fitness, strength and conditioning, sports performance, and biomechanics.

The intent to plan has been approved by the Executive Director and was presented to the Board as an informational item at the May 2024 Board meeting.

IMPACT AND RECOMMENDATION

A summary of the program proposal has been included as Attachment I. Additional information on this proposal is available from the Board office by request.

ATTACHMENTS

Attachment I – New Program Request Summary: NSU – MS in Sports Sciences

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DRAFT MOTION 20250402_5-A(3):

I move to authorize NSU to offer a MS in Sports Sciences, as presented.

Full Proposal – MS Sports Sciences
Northern State University

BOR Recommendation: The Board of Regents Academic Affairs and the Executive Director support the program request. This program will increase opportunities for students who prefer to complete a graduate degree at a regional comprehensive university close to their hometown while supporting their long-term career goals.

Program Description:

Catalog Description: The Master of Science in Sports Sciences provides a flexible and dynamic educational experience by offering students the choice of two specializations: Biomechanics & Exercise Physiology and Strength & Conditioning. These tailored options align with emerging trends in the sports industry and with standards set forth by national accrediting bodies in Sports Sciences. This approach empowers students to customize their education, ensuring alignment with their unique interests and career aspirations. This program is an excellent option for students interested in health, fitness, strength and conditioning, sports performance, and biomechanics. Courses offer a well-rounded curriculum that combines classroom learning with hands-on practical experiences.

Strength & Conditioning Specialization Course Catalog Description: The Strength & Conditioning specialization focus is on developing the skills and knowledge necessary for creating effective training programs that enhance athletic performance. This specialization prepares you for a successful career as a coach in multiple settings, including colleges, professional programs, private settings, and secondary schools. With hands-on learning experiences in Northern's biomechanics labs and Wolves Athletics and coursework grounded in current research, this program ensures a seamless transition to your career. Upon graduation, you'll be well-equipped to make meaningful contributions to the field of strength and conditioning.

Biomechanics & Exercise Physiology Course Catalog Description: The Biomechanics & Exercise Physiology specialization explores the intricate relationship between human movement and physiological responses. This specialized track delves into the fundamental principles of biomechanics and exercise physiology, providing students with an in-depth understanding of how the human body responds to sport and physical activity. Through a blend of theoretical coursework and hands-on laboratory experiences, students will gain practical skills in biomechanical analysis and exercise prescription. Topics covered include biomechanical assessments, neuromuscular control, cardiovascular and respiratory responses to exercise, and the application of these principles in designing tailored exercise interventions. This specialization prepares graduates for impactful roles in research, sports performance, rehabilitation, and exercise science, fostering a comprehensive understanding of the intricate mechanisms governing human movement and physiological adaptations.

Strategic Impact –

NSU Strategic Impact:

Mission Alignment

Northern's MS in Sports Sciences aligns seamlessly with Northern State University's mission by offering a specialized academic opportunity in exercise physiology, biomechanics, and strength

and conditioning. This program supports Northern's Strategic Enrollment Management (SEM) plan, which focuses on expanding graduate academic programs with robust enrollments and space for growth. In response to program growth trajectory, the University has redistributed an additional faculty line to Sports Sciences, and this new master's degree creates a growth opportunity for graduate enrollments.

Northern's MS in Sports Sciences prepares students for careers in health, wellness, and sports-related fields and enriches the local and regional community by contributing to the overall well-being of individuals within the community.

Strategic Plan Alignment

The MS in Sports Sciences strongly aligns with Northern State University's strategic plan, particularly

priorities 1, 3, and 5. [1] By offering an advanced academic program in Sports Sciences, NSU contributes to Priority 1 by expanding student access and success in a specialized field, fostering socioeconomic mobility, and serving the public good through education. Priority 3 is addressed through the program's potential to establish collaborative public/private partnerships, enhancing opportunities in the realms of health, recreation, and regional economic development. Furthermore, the Sports Sciences program inherently supports Priority 5 by providing a comprehensive educational experience focusing on experiential learning, aligning seamlessly with NSU's commitment to outstanding regional liberal arts and professional studies. This strategic alignment ensures that the proposed program contributes significantly to the university's overarching mission and goals.

Existing Program Array

The MS in Sports Sciences represents a financially prudent investment, maximizing the program offerings for a fully staffed Department of Sports Sciences. All 500-level courses in the program are cross-listed with 400-level courses, which expands program offerings with an efficient workload rotation for NSU faculty. The revamped program is poised to attain accreditation in Strength & Conditioning, elevating academic standards, improving recruitment messaging, and ensuring long-term quality for the program. This new program enhances the educational quality and accuracy of degrees awarded for more than half the students currently enrolled in Northern's MSEd in Sport Performance and Leadership program.

Northern's MSEd in Sport Performance and Leadership has consistently grown since its inception in 2012, and the program had an enrollment of 44 in fall 2024. Approximately half the students currently enrolled in the MSEd are pursuing careers in Biomechanics & Exercise Science and Strength & Conditioning. Offering a stand-alone MS in Sport Sciences with these two specializations enables Northern to award a degree that better aligns with the learning outcomes and career expectations of our students.

A new MS in Sports Sciences degree with two specializations offers a strategic marketing advantage and opportunities for accredited programs, enabling Northern to better recruit and serve our graduate students. Students in the MS in Sports Sciences will be better able to market themselves and their degree as preparing them for careers in Biomechanics & Exercise Science and Strength & Conditioning.

[1] https://northern.edu/sites/default/files/2023-11/strategic-plan-northern-state-university-2023.pdf

BOR Strategic Impact:

The MS in Sports Sciences aligns with the South Dakota Board of Regents Strategic Plan [2] goals in the following ways:

Goal #3 Academic Excellence, Student Outcomes, and Educational Attainment

The proposed program is driven by a commitment to align our programs with the rigorous demands of advanced studies in sports sciences, ensuring that our graduates are well-equipped for the complexities of their chosen field. The move responds to the evolving landscape of the sports industry, where specialized knowledge is increasingly crucial for meeting the dynamic needs of diverse career paths. By tailoring our programs to fit specific areas within the sports domain, we aim to better prepare our students for success in their chosen fields. The Sports Sciences MS is an improved and further advanced version of the current Sports Performance & Leadership MSEd program.

The program includes two specializations in Biomechanics & Exercise Physiology and Strength & Conditioning. The specializations directly align with student outcomes - 15% go into strength and conditioning and 14% pursue careers in health care (e.g., DPT, Chiropractic) in the last five years (2017-2022). One of the two specializations would go through accreditation. The strength and conditioning specialization will be accredited through the Council on Accreditation of Strength and Conditioning Education (CASCE).

Goal #4 Workforce Development & Economic Development

There is a growing demand for well-trained coaches, researchers, and leaders in various sports and organizations. Graduates with this degree will be well-positioned to pursue career opportunities in the sports industry. Industries related to sports performance are expected to grow 28% in South Dakota. Data projections nationwide expect fitness industry professionals to grow by 14% by 2032. Nationwide, careers in coaching are expected to grow by 9% and the need for officials will grow by 10%. Careers in sports are competitive, allowing specializations enables graduates to remain viable.

Northern's MS Sports Sciences reflects our commitment to providing students with programs that meet and exceed industry standards, ensuring their readiness and competitiveness in the ever-evolving sports sciences landscape. For example, the decision to offer a Strength & Conditioning specialization aligns with the accreditation standards set by the Commission of Accreditation in Strength & Conditioning Education (CASCE), ensuring that students seeking Certified Strength & Conditioning Specialist (CSCS) certification benefit from a curriculum that meets the rigorous criteria set by the accrediting body. Graduate programs are required to have CASCE accreditation in order for students to obtain the CSCS after 2030. Having a specialization titled ‘Strength and Conditioning' will make it clear to prospective students and employers that graduates are prepared for careers in the field.

Goal #5 – Financial Health and Competitiveness

The number of faculty in the Sports Sciences program has increased from 4 to 5 in response to growing enrollments in the existing master’s program and 3 existing undergraduate programs in the department. The new faculty line in Sports Sciences was reallocated from an underperforming

program. No new infrastructure would be needed. In preparation for the addition of the MS in Sports Sciences, the department added three new courses: Sport Analytics, Neuromuscular Exercise Physiology, and Advanced Biomechanics Lab Techniques, all of which are in the course rotations of the 5 faculty. The faculty lines are in place and can cover all courses with a one- or two-year rotation. The current MSEd in Sport Performance and Leadership is too broad, which hampers our recruiting efforts when students are seeking a graduate program in a specific career field (e.g., strength and conditioning, biomechanics).

The graduate faculty chair for the existing program meets with an average of 36 potential graduate students each academic year, and students who are not choosing to pursue graduate studies at Northern often site that they prefer a MS degree over an MSEd. In addition, alumni of Northern's current program, including those serving on the Sports Sciences Advisory Board, report that they would prefer their degree be an MS instead of an MSEd, as the field of Sports Sciences has grown in rigor and scientific research over the last 15 years.

[2] SDBOR Strategic Plan. https://sdbor.edu/wp-content/uploads/2023/09/StrategicPlan_22_27.pdf

Program Summary:

The classification of this program will be 31.0501 [Health and Physical Education, General]. This program is proposed to be offered beginning Fall 2025 on campus at NSU as well as online utilizing Hy-Flex teaching methods. NSU will pursue program accreditation through the Council on Accreditation in Strength and Conditioning Education (CASCE). Because NSU will host two external reviewers (one for each specialization) as a part of this accreditation process, the Board Office waived the external review required by the new program proposal process.

Duplication and Competition:

USD offers an MS in Kinesiology and Sport Management and SDSU offers an MS in Sport and Recreation Administration and an MS in Nutrition and Exercise Science.

The Integrated Postsecondary Education Data System (IPEDS) for 2022-2023 reporting shows that South Dakota produced a total of 60 graduate completers in related fields.

Regental Universities[1]:

University	Master's Degrees Conferred in Related Fields	Total Number of Master's Degrees Conferred at Each Institution
SDSU – Sport and Recreation Administration, MS	11	334
SDSU – Nutrition and Exercise Sciences, MS	18	
USD – Kinesiology and Sport Management, MS	21	530

[1] Integrated Postsecondary Education Data System (IPEDS) for 2022-2023

Private SD Universities[2]:

University	Master's Degrees Conferred in Related Fields	Total Number of Master's Degrees Conferred At Each Institution
Augustana University, Sports Administration and Leadership, MA	10	190

Total Sum of SD Findings:

University	Total Master's Degrees in Related Fields Conferred in SD	Total Number of Master's Degrees Conferred (All SD Universities Listed Above)
Total	60	1054

The number of conferred master's degrees in fields related to Sports Sciences, as reported by IPEDs, was 60 for all of South Dakota.

Regarding duplication, NSU argues that its program will specialize in Strength & Conditioning and Biomechanics & Exercise Physiology. The programs at USD and SDSU do not focus on Strength and Conditioning. NSU's existing MSEd in Sports Sciences has experienced significant growth in the last 10 years. They also argue that this program will give student-athletes more options, especially those interested in working with Division II programs.

Competitor University Peers[3]:

University	Total Master's Degrees in Related Fields Conferred	Total Number of Master's Degrees Conferred at Each Institution
Fort Hays State University, Strength and Conditioning	28	794
Indiana University of Pennsylvania, Strength and Conditioning	65	536
Western Colorado University, Exercise Physiology and Kinesiology	11	177

Workforce Outlook/State Need:

South Dakota Department of Labor & Regulation statistics [1]: According to job opening data by occupation in South Dakota, over a six-month period (June-December) 2023 in

- Coaches and Scouts had 124 job openings, 69 new postings

[2] Integrated Postsecondary Education Data System (IPEDS) for 2022-2023

[3] IPEDS, 2022-2023

- Exercise Trainers and Group Fitness Instructors had 50 job openings, 35 new postings
- Recreation Workers had 83 job openings, 60 new postings
- Strength & Conditioning had 5 job openings.

Nationwide, LinkedIn lists positions available for 1,668 personal trainers, 829 fitness trainers, 2,051 coaches, and over 9,000 jobs in sport management on one date in March 2024. [2]

According to the South Dakota Department of Labor & Regulation, in the following occupations, graduates can earn [3]

- Recreation and Fitness Studies Teachers, Postsecondary, mean $60,010, median $58,900
  - Eastern South Dakota, mean $64,130, median $64,520
- Coaches and Scouts, mean $45,790, median $38,930
  - Eastern South Dakota, mean $47,720, median $40,810
- Exercise Trainers and Group Fitness Instructors, mean $36,130, median $33,280
  - Eastern South Dakota, mean $33,720, median $30,150

According to the United States Bureau of Labor Statistics, in the following occupations, graduates working in the US can earn [4]:

- Recreation and Fitness Studies Teachers, Postsecondary, mean $82,020, median $72,650
- South Dakota is ranked 3rd for highest concentration of jobs
- Coaches and Scouts, mean $57,450, median $44,890
- Montana (1), Iowa (2), and North Dakota (4) are among the top five states for highest concentration of employment for coaches/scouts
- Exercise Physiologist, mean $55,820, median $51,350
- Exercise Trainers and Group Fitness Instructors, mean $50,170, median $45,380
- Montana has the highest concentration of jobs

According to the United States Bureau of Labor Statistics, regional need in the following occupations is [4]:

- Recreation and Fitness Studies Teachers, Postsecondary, South Dakota is ranked 3rd for highest concentration of jobs
- Coaches and Scouts, Montana (1), Iowa (2), and North Dakota (4) are among the top five states for highest concentration of employment for coaches/scouts
- Exercise Trainers and Group Fitness Instructors, Montana has the highest concentration

[1] https://www.southdakotaworks.org/vosnet/default.aspx
[2] https://www.linkedin.com/jobs/fitness-trainer-jobs/?currentJobId=3821899539
[3] https://dlr.sd.gov/lmic/documents/wages/sd_statewide_occupational_wages_2022.pdf
[4] https://www.bls.gov/bls/blswage.htm

Student Learning Outcomes:

1. Assessment and Evaluation of Physical Performance: Students will demonstrate the ability to assess and evaluate physical performance across multiple domains (e.g., strength, endurance, flexibility, movement patterns) using a variety of tools and technologies (e.g.,

fitness testing protocols, motion analysis, force platforms) to guide individualized programming and decision-making.

2. Program Design and Implementation: Students will apply evidence-based principles to design, implement, and modify strength and conditioning programs or exercise interventions tailored to meet the specific needs of diverse populations, including athletes, clinical populations, and general fitness clients.

3. Communication and Instruction: Students will develop the ability to communicate effectively and professionally with a wide range of audiences, including clients, athletes, healthcare providers, and colleagues. This includes providing clear verbal and written instructions, feedback, and performance assessments to facilitate optimal program adherence and understanding.

4. Ethical and Professional Behavior: Students will demonstrate professional behavior and ethical conduct in all interactions, adhering to the highest standards of practice, confidentiality, and cultural sensitivity as outlined by professional organizations.

5. Critical Thinking and Evidence-Based Practice: Students will critically analyze and synthesize current research in sports sciences, integrating evidence-based practices into program design, performance evaluation, and injury prevention strategies to improve client outcomes and ensure safety.

6. Health, Wellness, and Injury Prevention: Students will demonstrate an understanding of how to design and implement exercise programs that not only enhance athletic performance but also focus on improving overall health, promoting wellness, and preventing injury while considering recovery, nutrition, and lifestyle factors.

7. Lifelong Learning and Professional Development: Students will recognize the importance of lifelong learning by engaging in continuous professional development, pursuing advanced certifications, attending workshops, and staying current with the latest research and trends in sports science and exercise science.

8. Collaboration and Leadership in Multidisciplinary Settings: Students will exhibit leadership and collaborative skills within multidisciplinary teams, working effectively with other health professionals (e.g., physicians, nutritionists, athletic trainers) to enhance client outcomes and foster a supportive training and recovery environment.

Projected Enrollment:

ESTIMATES	FISCAL YEARS*					
	1st Year	2nd Year	3rd Year	4th Year	5th Year	6th Year
	FY 26	FY 27	FY 28	FY 29	FY 30	FY 31
Students new to the university	15	15	16	16	17	17
Students from other university programs	12					
Students off-campus or distance						
continuing students		14	14	15	16	17
Total students in the program (fall)	**27**	**29**	**30**	**31**	**33**	**34**
Program credit hours (major Courses)**	441	477	492	510	543	561
Graduates	12	13	13	14	15	15

**Do not include current fiscal year.*

***This is the total number of credit hours generated by students in the program in the required or elective program courses. Use the same numbers in Appendix B – Budget.*

The Sports Sciences department received requests from undergraduate and graduate students to offer MS degrees in Sports Sciences and to offer focused specializations to advance career and doctoral-level pursuits. Through the post-graduate outcomes research, they found that 35% of graduates are coaching at the collegiate level, and approximately 15% go into strength and conditioning coaching roles, sport management, or healthcare. With the specialization accreditations, the department will meet the needs of its students and aid in their success post-graduation. Accreditation by CASCE for the Strength & Conditioning specialization is a certification mandate by 2030. Being one of the very few graduate programs accredited by CASCE will increase demand and enrollment numbers.

Projected Revenue/Expenses:

FINANCIAL HEALTH SUMMARY	1st FY24	2nd FY25	3rd FY26	4th FY27	5th FY28	6th FY29
TUITION & FEE REVENUES	139,412	150,792	155,534	161,224	171,657	177,347
PROGRAM EXPENSES	101,648	100,896	101,537	102,210	102,917	103,659
NET (T&F REVENUES LESS PROGRAM EXPENSES)	**37,764**	**49,896**	**53,997**	**59,014**	**68,739**	**73,687**
OTHER SUPPORTING REVENUES	-	-	-	-	-	-
NET AFTER OTHER SUPPORTING REVENUES	**37,764**	**49,896**	**53,997**	**59,014**	**68,739**	**73,687**

NSU has invested in the growing Sports Sciences programs by reallocating one additional faculty line to Sports Sciences. The department has five dedicated faculty supporting all academic programs. Sports Sciences faculty are dedicated to pursuing accreditation. The Chair is leading and overseeing program accreditation as part of their chair workload, and all of the faculty are contributing to accreditation work as part of their service to the university under normal workload. The discipline fee funds will be used to support program accreditation as well as human performance and biomechanics labs and research.

The five faculty in Sports Sciences will teach nearly all of the courses in the three undergraduate programs and the two graduate programs in Sports Sciences. Sports Sciences has one graduate teaching assistant (GTA), employs coaches and staff in Northern Athletics to teach specific courses (e.g. coaching, strength and conditioning, athletic training), and employs staff from the South Dakota School for the Blind and Visually Impaired (SDSBVI) to teach specialized courses (adapted physical education). Fully staffed with five faculty, the Sports Sciences uses very few adjuncts to teach technical courses like CPR.