



**SOUTH DAKOTA BOARD OF REGENTS
ACADEMIC AFFAIRS FORMS**

New Certificate

UNIVERSITY:	SDSU
TITLE OF PROPOSED CERTIFICATE:	Bison Studies
INTENDED DATE OF IMPLEMENTATION:	Fall 2025
PROPOSED CIP CODE:	01.0999
UNIVERSITY DEPARTMENT:	Animal Science
BANNER DEPARTMENT CODE:	SANS
UNIVERSITY DIVISION:	College of Agriculture, Food and Environmental Sciences
BANNER DIVISION CODE:	3F

Please check this box to confirm that:

- The individual preparing this request has read [AAC Guideline 2.3.2.2.C](#), which pertains to new certificate requests, and that this request meets the requirements outlined in the guidelines.
- This request will not be posted to the university website for review of the Academic Affairs Committee until it is approved by the Executive Director and Chief Academic Officer.

University Approval

To the Board of Regents and the Executive Director: I certify that I have read this proposal, that I believe it to be accurate, and that it has been evaluated and approved as provided by university policy.

2-4-2025

Institutional Approval Signature

Date

President or Chief Academic Officer of the University

1. Is this a graduate-level certificate or undergraduate-level certificate?

Undergraduate Certificate

Graduate Certificate

2. What is the nature/ purpose of the proposed certificate? Please include a brief (1-2 sentence) description of the academic field in this certificate.

The Bison Studies Certificate will develop students into successful managers and producers in the field of bison production. Students will be prepared on adequate bison nutrition, herd management, health protocols, and grazing management. The certificate will focus on fundamentals of the production, day-to-day management, and raising bison for profit and cultural purposes. Bison are a keystone species in North American ecology and heritage. This program will highlight this species such that students will learn immersive techniques and gain

new knowledge and respect for the national mammal of the United States.

Bison production has reached an all-time high in the United States since the era of market hunting. Bison meat has entered the US meat industry market share and gains more of that share every year. Bison producers now encompass every state in the continental US, and there is a need for the producers to be supported by academics and professionals. The certificate will produce graduates that will enter the workforce prepared to give detailed support to the producers in their daily management, feeding, and production of bison. It will also give students the ability to enter the bison production system themselves and raise bison for profit or in their home tribes as cultural herds.

3. If you do not have a major in this field, explain how the proposed certificate relates to your university mission and strategic plan, and to the current Board of Regents Strategic Plan 2014-2020.

The bison studies program will support South Dakota State University's mission, as outlined in SDBOR Policy 1.2.5, by offering academic programs in the liberal arts and sciences as well as professional education in agriculture, education, engineering, home economics, business economics, nursing, and pharmacy. Bison are a species that falls underneath the facets of both animal science and natural resources, which are both housed in the College of Agriculture, Food and Environmental Sciences at SDSU. Bison studies is a growing field in academia, and South Dakota State University is uniquely positioned to utilize its existing resources to offer this program. This certificate provides students with opportunities to use this knowledge to serve this industry in future service and research. By housing the Center of Excellence for Bison Studies, two dedicated bison faculty, and as the official research partner with the largest bison producer in the world (Turner Enterprises), SDSU has strategically placed itself at the forefront of bison research and teaching capabilities. This certificate will capitalize on these relationships by offering a unique field of study that will inevitably draw more. The proposed certificate aligns with Goal 4, Workforce and Economic Development, of the SDBOR strategic plan by providing an enhanced undergraduate opportunity that aligns with a need for a greater workforce in the growing bison industry in South Dakota and the nation. Similarly, it aligns with the SDSU Strategic Plan goal to Achieve Excellence Through Transformative Education as it is a unique and innovative undergraduate opportunity with an emphasis on workforce and economic development of the growing bison industry.

4. Provide a justification for the certificate program, including the potential benefits to students and potential workforce demand for those who graduate with the credential. For workforce related information, please provide data and examples. Data may include, but are not limited to the South Dakota Department of Labor, the US Bureau of Labor Statistics, Regental system dashboards, etc. Please cite any sources in a footnote.

Bison production has reached an all-time high in the United States since the era of market hunting. The estimated herd size in the United States is approximately 400,000¹, with 192,477 of those animals owned in private herds located in 1,986 private ranches across the US.¹ Bison meat has entered the US meat industry market share and gains more of that share every year, currently earning premium prices compared to beef.² Bison producers now encompass every state in the continental US, and there is a need for the producers to be supported by academics and professionals. This certificate will help generate graduates prepared to enter the workforce

¹ National Bison Association. <https://bisoncentral.com/bison-by-the-numbers/>

² USDA. https://www.ams.usda.gov/mnreports/ams_2827.pdf

to give detailed support to the producers in their daily management, feeding, and production of bison. While there is not a full market assessment of bison related positions available, there are multiple positions for persons specifically with bison related skills at both the Turner Enterprise for Ecoagriculture and the National Bison Association.^{1,3} This certificate also gives students the ability to enter the bison production system themselves and raise bison for profit or in their home tribes as cultural herds. Students will also have added value in the field of wildlife and fisheries science/natural resource management as park biologists, managers, zookeepers, and experts in the field of wildlife conservation.

5. Who is the intended audience for the certificate program (including but not limited to the majors/degree programs from which students are expected)?

The intended audience is primarily undergraduate students in the Departments of Animal Science and Natural Resource Management, which total over 700 students in fall 2024.⁴ In addition, bison play a pivotal role in American Indian culture, making the courses and certificate of interest to American Indian and Indigenous Studies majors.

6. Certificate Design

A. Is the certificate designed as a stand-alone education credential option for students not seeking additional credentials (i.e., a bachelor's or master's degree)? If so, what areas of high workforce demand or specialized body of knowledge will be addressed through this certificate?

This certificate is not intended as a stand-alone credential; however, there is the potential for this to appeal to non-traditional and/or non-degree seeking students.

B. Is the certificate a value added credential that supplements a student's major field of study? If so, list the majors/programs from which students would most benefit from adding the certificate.

Yes. The certificate will be a value-added credential to students enrolled in Animal Science, Ecology and Environmental Science - Rangeland Ecology and Management, Wildlife and Fisheries Sciences, and American Indian and Indigenous Studies.

C. Is the certificate a stackable credential with credits that apply to a higher level credential (i.e., associate, bachelor's, or master's degree)? If so, indicate the program(s) to which the certificate stacks and the number of credits from the certificate that can be applied to the program.

This certificate is not designed as a stackable credential. However, students will be able to apply the credits to their undergraduate degrees.

7. List the courses required for completion of the certificate in the table below (if any new courses are proposed for the certificate, please attach the new course requests to this form).

³ Tedturner.com

⁴ Edify, SDSU Program Enrollment, accessed December 17, 2024

Prefix	Number	Course Title	Prerequisites for Course	Credit Hours	New (yes, no)
AS OR WL	101-101L 220	Introduction to Animal Science and Laboratory (3, 1 cr.) Introduction to Wildlife & Fisheries Management (3 cr.)	None	3-4	No
AS	231	Introduction to Bison Management	AS 101-101L or WL 220	3	Yes
AS	431	Advanced Bison Production	AS 231	3	Yes
RANG	205	Introduction to Range Management	None	2	No
RANG	205L	Introduction to Range Management Lab	None	1	No
Subtotal				12-13	

8. Student Outcome and Demonstration of Individual Achievement.

Board Policy 2:23 requires certificate programs to “have specifically defined student learning outcomes.

A. What specific knowledge and competencies, including technology competencies, will all students demonstrate before graduation? *The knowledge and competencies should be specific to the program and not routinely expected of all university graduates.*

After completion of this certificate, students will be able to:

- Describe and demonstrate basic animal husbandry techniques and strategies.
- Utilize marketing principles as they apply to bison, bison products and associated value-added opportunities.
- Conduct in depth analysis of habitat management and practices for bison production, including basic plant and soil characteristics applicable to range and grazing management.
- Develop grazing practices that fit individual models/persons.
- Employ and interpret common methods and techniques of population management.

B. Complete the table below to list specific learning outcomes – knowledge and competencies – for courses in the proposed program in each row.

Individual Student Outcome	Program Courses that Address the Outcomes			
	AS 101-101 or WL 220	AS 231*	AS 431*	RANG 205-205L*
Describe and demonstrate basic animal husbandry techniques and strategies.	X	X	X	
Utilize marketing principles as they apply to bison, bison products and associated value-added opportunities.		X	X	
Conduct in depth analysis of habitat management and practices for bison production, including basic plant and soil characteristics applicable to range and grazing management.	X	X	X	X
Develop grazing practices that fit individual models/producers.			X	X
Employ and interpret common methods and techniques of population management.	X	X	X	

9. Delivery Location.

Note: The accreditation requirements of the Higher Learning Commission (HLC) require Board approval for a university to offer programs off-campus and through distance delivery.

A. Complete the following charts to indicate if the university seeks authorization to deliver the entire program on campus, at any off campus location (e.g., USD Community College for Sioux Falls, Black Hills State University-Rapid City, Capital City Campus, etc.) or deliver the entire program through distance technology (e.g., as an on-line program)?

	Yes/No	Intended Start Date
On campus	Yes	Fall 2025

	Yes/No	If Yes, list location(s)	Intended Start Date
Off campus	No		

	Yes/No	If Yes, identify delivery methods <i>Delivery methods are defined in AAC Guideline 2.4.3.B.</i>	Intended Start Date
Distance Delivery (online/other distance delivery methods)	No		
Does another BOR institution already have authorization to offer the program online?	No	If yes, identify institutions:	

B. Complete the following chart to indicate if the university seeks authorization to deliver more than 50% but less than 100% of the certificate through distance learning (e.g., as an on-line program)? This question responds to HLC definitions for distance delivery.

	Yes/No	If Yes, identify delivery methods	Intended Start Date
Distance Delivery (online/other distance delivery methods)	No		

Appendix A
Corresponding Curriculum Requests – New Course Requests



SOUTH DAKOTA BOARD OF REGENTS
ACADEMIC AFFAIRS FORMS

New Course Request

SDSU	College of Agriculture, Food & Environmental Sciences / Animal Science
Institution	Division/Department
Dennis D. Hedge	2/3/2025
Institutional Approval Signature	Date

Section 1. Course Title and Description

Prefix & No.	Course Title	Credits
AS 231	Introduction to Bison Management	3

Course Description
The introductory course provides the foundations of bison management and production theory. This course will focus on the discussion of various principles that are necessary to understand before utilizing field work in relation to bison.

Pre-requisites or Co-requisites

Prefix & No.	Course Title	Pre-Req/Co-Req?
AS 101-101L OR WL 220	Introduction to Animal Science & Lab Introduction to Wildlife & Fisheries Management	Pre-req

Registration Restrictions

None

Section 2. Review of Course

2.1. Will this be a unique or common course?

Unique Course

Prefix & No.	Course Title	Credits
WL 220	Introduction to Wildlife and Fisheries Management	3
AS 264	Ruminant Livestock Production	3

Provide explanation of differences between proposed course and existing system catalog courses below:

The proposed course is specific to bison production and management and will focus only on that species. WL 220 is a broad-based course that covers multiple species of wildlife and fish, with a maximum of one or two lectures that directly relate to bison production. Similarly, AS 264 covers livestock species of beef cattle, sheep and goats, and currently has no lectures specifically focused on bison. Although some principles (e.g. digestive systems, grass management) from these courses are broad enough to have some application to bison production, that is not the focus of either course.

Section 3. Other Course Information

3.1. Are there instructional staffing impacts?

No. Schedule Management, explain below: This course will be part of the workload of an

existing faculty member. This class is currently being taught as a Topics course. AS 231 will be taught once per year in the spring semester.

3.2. Existing program(s) in which course will be offered: Bison Studies Certificate, Bison Studies Minor

3.3. Proposed instructional method by university (as defined by AAC Guideline 2.4.3.A): R - Lecture

3.4. Proposed delivery method by university (as defined by AAC Guideline 2.4.3.B and 2.4.3.B(A-1)):
001 - Face to Face

3.5. Term change will be effective: Fall 2025

3.6. Can students repeat the course for additional credit? Yes, total credit limit: No **3.7.**

Will grade for this course be limited to S/U (pass/fail)? Yes No

3.8. Will section enrollment be capped? Yes, max per section: No

3.9. Will this course equate (i.e., be considered the same course for degree completion) with any other unique or common courses in the common course system database in Colleague and the Course Inventory Report? Yes No

3.10. Is this prefix approved for your university? Yes No

Section 4. Department and Course Codes (Completed by University Academic Affairs)

4.1. University Department: Animal Science

4.2. Banner Department Code: SANS

4.3. Proposed CIP Code: 01.0901

Is this a new CIP code for the university? Yes No

**NEW COURSE REQUEST
Supporting Justification for On-Campus Review**

<u>Rosie Nold</u> Request Originator	<u>Rosie Nold</u> Signature	<u>12/10/2024</u> Date
<u>John R Jaeger</u> Department Chair	<u>John R Jaeger</u> Signature	<u>12/10/2024</u> Date
<u>James Connors</u> School/College Dean	<u>James Connors</u> Signature	<u>12/10/2024</u> Date

1. Provide specific reasons for the proposal of this course and explain how the changes enhance the curriculum.

Bison Studies is a growing field in academia, and South Dakota State University is uniquely positioned to utilize its existing resources to offer this course. By housing the Center of Excellence for Bison Studies, two dedicated bison faculty, and as the official research partner with the largest bison producer in the world (Turner Enterprises), SDSU has strategically placed itself at the forefront of bison research and teaching capabilities. This course will capitalize on these relationships by offering a unique field of study that will inevitably draw more students into undergraduate and graduate populations. By offering this course to students in numerous majors at SDSU, they will be better equipped to service the needs of the bison industry, whether their career paths take them into private industry, public management, or tribal relations. The proposed course will provide students an introduction to all aspects of the bison industry including animal management, health and nutrition, grazing management, and marketing, thus providing students a broad knowledge that enhances their ability to enter any aspect of the industry.

2. Note whether this course is: Required Elective

3. In addition to the major/program in which this course is offered, what other majors/programs will be affected by this course?

This course may be an elective for any student; however, it may be of interest to students in the Animal Science Department, Natural Resource Management Department, and School of American and Global

Studies. Applicable programs include all Animal Science specializations, Ecology and Environmental Science – Rangeland Ecology and Management Specialization, Conservation Planning and Park Management, Wildlife and Fisheries Science, and American Indian and Indigenous Studies.

4. If this will be a dual listed course, indicate how the distinction between the two levels will be made.
N/A
5. Desired section size 30
6. Provide qualifications of faculty who will teach this course. List name(s), rank(s), and degree(s).
Philip Urso, Assistant Professor, Ph.D.
7. Note whether adequate facilities are available and list any special equipment needed for the course.
Adequate facilities to teach this course successfully are present at SDSU. Current plans include a partnership with SDSU, Custer State Park, and Bad River Ranches (Turner Enterprises). This partnership will work in tandem with bison round ups to get students hands on experiences working with animals.
8. Note whether adequate library and media support are available for the course.
Library and media support is available and more than adequate for this course.
9. Will the new course duplicate courses currently being offered on this campus? Yes No
10. If this course may be offered for variable credit, explain how the amount of credit at each offering is to be determined.
N/A



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New Course Request

SDSU	College of Agriculture, Food & Environmental Sciences / Animal Science
Institution	Division/Department
Dennis D. Hedge	2/3/2025
Institutional Approval Signature	Date

Section 1. Course Title and Description

Prefix & No.	Course Title	Credits
AS 431-531	Advanced Bison Production	3

Course Description
An in-depth course focusing on bison management and production techniques specific to bison. Intensive, governmental, and tribal production systems will be thoroughly explored.

AS 431 Pre-requisites or Co-requisites

Prefix & No.	Course Title	Pre-Req/Co-Req?
AS 231	Introduction to Bison Management	Pre-req

AS 431 Registration Restrictions

Junior or Senior standing only

Section 2. Review of Course

2.1. Will this be a unique or common course?

Unique Course

Prefix & No.	Course Title	Credits
WL 411-411L	Principles of Wildlife Management and Lab	2, 1

Prefix & No.	Course Title	Credits
AS 474-474L	Cow-Calf Management and Lab	2, 1

Provide explanation of differences between proposed course and existing system catalog courses below:

The proposed course is specific to bison production and management and will focus only on that species. WL 411-411L is a broad-based course that covers multiple species of wild birds, mammals and herps, with a maximum of one or two lectures that directly relate to bison production. Similarly, AS 474-474L is specific to cow-calf production and currently has no lectures specifically focused on bison. Although some principles (e.g. digestive systems, grass management) from these courses are broad enough to have some application to bison production, that is not the focus of either course.

Section 3. Other Course Information

3.1. Are there instructional staffing impacts?

No. Schedule Management, explain below: Workload is available to teach this course. AS 431-531 will be taught once per year in the fall semester.

3.2. Existing program(s) in which course will be offered: Bison Studies Certificate, Bison Studies Minor

3.3. Proposed instructional method by university (as defined by [AAC Guideline 2.4.3.A](#)): R - Lecture

3.4. Proposed delivery method by university (as defined by [AAC Guideline 2.4.3.B](#) and [2.4.3.B\(A-1\)](#)):

001 - Face to Face

3.5. Term change will be effective: Fall 2025

3.6. Can students repeat the course for additional credit? Yes, total credit limit: No **3.7.**

Will grade for this course be limited to S/U (pass/fail)? Yes No

3.8. Will section enrollment be capped? Yes, max per section: No

3.9. Will this course equate (i.e., be considered the same course for degree completion) with any other unique or common courses in the common course system database in Colleague and the Course Inventory Report? Yes No

3.10. Is this prefix approved for your university? Yes No

Section 4. Department and Course Codes (Completed by University Academic Affairs)

4.1. University Department: Animal Science

4.2. Banner Department Code: SANS

4.3. Proposed CIP Code: 01.0901

Is this a new CIP code for the university? Yes No

NEW COURSE REQUEST Supporting Justification for On-Campus Review

Rosie Nold	Rosie Nold	12/10/2024
Request Originator	Signature	Date
John R Jaeger	John R Jaeger	12/10/2024
Department Chair	Signature	Date
James Connors	James Connors	12/10/2024
School/College Dean	Signature	Date

1. Provide specific reasons for the proposal of this course and explain how the changes enhance the curriculum.

Bison Studies is a growing field in academia, and South Dakota State University is uniquely positioned to utilize its existing resources to offer this course. By housing the Center of Excellence for Bison Studies, two dedicated bison faculty, and as the official research partner with the largest bison producer in the

world (Turner Enterprises), SDSU has strategically placed itself at the forefront of bison research and teaching capabilities. This course will capitalize on these relationships by offering a unique field of study that will inevitably draw more students into undergraduate and graduate populations. By offering this course to students in numerous majors at SDSU, they will be better equipped to service the needs of the bison industry, whether their career paths take them into private industry, public management, or tribal relations. The proposed course will provide students with in-depth study of all aspects of bison production including animal management, health and nutrition, grazing management, and marketing, thus providing students technical expertise to make them sought after employees for many aspects of the bison industry.

2. Note whether this course is: Required Elective

3. In addition to the major/program in which this course is offered, what other majors/programs will be affected by this course?

This course may be an elective for any student; however, it may be of interest to students in the Animal Science Department, Natural Resource Management Department and School of American and Global Studies. Applicable programs include all Animal Science specializations, Ecology and Environmental Science – Rangeland Ecology and Management Specialization, Conservation Planning and Park Management, Wildlife and Fisheries Science, and American Indian and Indigenous Studies.

4. If this will be a dual listed course, indicate how the distinction between the two levels will be made. Graduate students enrolling in AS 531 will be subjected to an additional assignment which includes an academic style presentation to be presented to the full class. This presentation may be inclusive of their research or industry topics as assigned.

5. Desired section size 25

6. Provide qualifications of faculty who will teach this course. List name(s), rank(s), and degree(s).
Philip Urso, Assistant Professor, Ph.D.

7. Note whether adequate facilities are available and list any special equipment needed for the course. Adequate facilities to teach this course successfully are present at SDSU. Current plans include a partnership with SDSU, Custer State Park, and Bad River Ranches (Turner Enterprises). This partnership will work in tandem with bison round ups to get students hands on experiences working with animals.

8. Note whether adequate library and media support are available for the course.
Library and media support is available and more than adequate for this course.

9. Will the new course duplicate courses currently being offered on this campus? Yes No

10. If this course may be offered for variable credit, explain how the amount of credit at each offering is to be determined.

N/A