New Academic Degree Program
Full Proposal Application
South Dakota Board of Regents
Academic Affairs Forms

Internal Ticket ID: 27378
Created: 6/13/2025
Modified: 5/28/2026

Use this form to propose a new degree program. The Board of Regents, Executive Director, and/or their designees may request additional information about the proposal. After the university President approves the proposal, submit a signed copy to the Executive Director through the System Academic Officer (through the online submission process).

Note: Within the proposal, all references to external sources should be documented with a footnote (including web addresses where applicable).

University BHSU - Black Hills State University
Degree MS : Master of Science
Name of Major X999 : New Major Requested **STEM Education**
Specialization Required? No
Note: If the new proposed program includes specific specializations within it, complete and submit a New Specialization Form for each proposed specialization and attach it to this form. Since specializations appear on transcripts, they require Board approval.
College/Department 6D : BHSU College of Education/BSCE : School of Education
Planned CIP Code 13.1316
WICHE WRRGP Eligibility

Program Description

1. Provide the working program description that may appear in the university catalog.

The MS in STEM Education prepares students to teach and lead in science, technology, engineering, and mathematics.

2. Does the university request any exceptions to any Board policy for this program?
Explain any requests for exceptions to Board Policy. If not requesting any exceptions, indicate "None."

We are requesting an exemption from a site visit because the program is not creating new courses for the proposed program.

Strategic Impact

3. Describe how the program fits in with the institutional mission, strategic plan, existing institutional program array, and academic priorities.

Institutional Mission: Part of BHSU's institutional mission is to meet regional workforce demands, and this degree will help our local partners meet the sustained demand for STEM educators.

BHSU Strategic Plan: This degree request aligns with Goal 1, Objective 5 of the BHSU Strategic Plan, by improving student readiness for job searches and career planning. Additionally, the program aligns with Goal 2, Objective 3, aligning curriculum with emerging workforce needs in western South Dakota.

BHSU/SURF Collaborative Work Plan regarding Education and Outreach: This plan includes the development and offering of a Master's degree in STEM education. The plan is attached.

The proposed program will provide a pathway for teachers to build their leadership capacity in STEM education by creating a professional network for novice and veteran P-12 teachers. Graduates will be equipped to mentor new STEM teachers in their districts, facilitate professional development for their peers, and connect with STEM researchers. Additionally, there are P-12 science teachers in South Dakota, particularly rural districts, teaching outside of their primary area of expertise, and this program would provide the opportunity to strengthen their content and pedagogical knowledge in all areas of STEM education.

With the increasing complexity and interconnectedness of biotechnology, quantum computing, physics, and medicine, building the capacity of South Dakota's STEM educators is critical for workforce development.

If the program does not align to the strategic plan, provide a compelling rationale for the institution to offer the program.

4. How does the program connect to the Board of Regent's Strategic Plan?

This program connects directly with Goal 3 (Academic Excellence, Student Outcomes, Educational Attainment), Step 4 under Student Outcomes: Initiate collaborative partnerships for STEM pathways. Additionally, the program aligns directly with Goal 4 (Workforce and Economic Development), Step 1 under Workforce Alignment: Place special emphasis on STEM, Teacher Education, Nursing and Healthcare, and Business undergraduate completion.

Program Summary

5. If a new degree is proposed, what is the rationale?
This question refers to the type of degree, not the program. For example, if your university has authorization to offer the Bachelor of Science and the program requested is a Bachelor of Science, then the request is not for a new degree.

NA - BHSU is already authorized to offer MS degrees.

With the increasing complexity and interconnectedness of biotechnology, quantum computing, physics, and medicine, building the capacity of South Dakota's STEM educators is critical for workforce development.

6. What modality/modalities will be used to offer the new program?

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.

	Yes/No	Intended Start Date	
On Campus	Yes	Fall 2026	
	Yes/No	**Location(s)**	**Intended Start Date**
Off Campus Location	Yes	SURF	Fall 2026
	Yes/No	**Delivery Method(s)**	**Intended Start Date**
Distance Delivery	Yes	Online	Fall 2026
	Yes/No	**Identify Institutions**	
Does another BOR institution already have authorization to offer the program online?	Yes	University of South Dakota offers STEM specialization in the elementary and secondary Master's degrees.	

7. If the program will be offered through distance delivery, identify the planned instructional modality:

Both / HyFlex

8. What are the student learning outcomes for this program?

Student Learning outcomes will focus on five distinct but overlapping areas. The five areas are: Content Knowledge and Integration, Instructional Design, Research and Evidence-based practice, Leadership and professional collaboration, and Application and Innovation. Each of these five areas is addressed in the preliminary assessment plan.

9. For associate's and bachelor's degree proposals, identify the 3-5 AAC&U Essential Learning Outcomes that have been selected for this program.

Use the chart below to indicate the student learning outcomes that align to the selected ELOs (See BOR Policy 2.11 and Guideline 8.5).

Essential Learning Outcomes (AAC&U)	Student Learning Outcomes
Inquiry and Analysis	
Critical and Creative Thinking	
Information Literacy	
Teamwork	
Problem Solving	
Civic Knowledge and Engagement	
Intercultural Knowledge	
Ethical Reasoning	
Foundational Lifelong Learning Skills	
Integrative Learning	

10. Enter the number of credit hours required to graduate

Credit Hours	30

11.Complete the following tables to provide a degree program curriculum summary.

A. Table 1 –Total Program Degree Credit Hours

	Credit Hours In Program	
	Hours Per Requirement	%Total Hours
System General Education Requirements		
Subtotal - Gen Ed Requirements		%
Program Requirements		
Required Support Courses		
Major Requirements	30	
Major Electives		
Subtotal - Program Requirements		%
Free Electives		
Subtotal - Free Electives		%
Degree Total	30	%

**Board Policy 2:29 requires each baccalaureate level degree program to require 120 credit hours and each associate degree program to require 60 credit hours. Exceptions to this policy require documentation that programs must comply with specific standards established by external accreditation, licensure, or regulatory bodies or for other compelling reasons, and must receive approval by the Executive Director in consultation with the President of the Board of Regents.*

B. Table 2 – Insert Required Program Support Courses Impacting Other Programs (outside department). Do not include General Education courses.

*The individual curriculum tables should be included as a word document **attached** to the TDX ticket.*

C. Table 3 – Insert Major Requirements (within department)

*The individual curriculum tables should be included as a word document **attached** to the TDX ticket.*

D. Table 4 – Insert Major Electives

*The individual curriculum tables should be included as a word document **attached** to the TDX ticket.*

12. New Course Approval

New courses required to implement the new degree program may receive approval in conjunction with program approval or receive approval separately. Please check the appropriate statement:

No

Academic Quality

13. What peer institutions and current national standards will be referenced to develop the curriculum for this program?

Peer Institution: Regional and Competitive institutions. Include links to at least 3 comparable programs at peer institutions and links to national or accreditation standards, if any.

USD MA Elementary Education: STEM Education specialization: https://catalog.usd.edu/preview_program.php?catoid=40&poid=9297&returnto=2629

USD MA Secondary Education: STEM Education Specialization: https://catalog.usd.edu/preview_program.php?catoid=40&poid=9324

University of Nebraska Kearney STEM Education Program: https://www.unk.edu/academics/science-math-ed/program-courses.php

Colorado School of Mines: MS in STEM Education: https://www.mines.edu/teacherprep/programs-msse/

CAEP Advanced-level standards: https://caepnet.org/standards/2022-adv

14. What program accreditation is available, if any?

CAEP Advanced-level accreditation

15. Will the proposed program pursue accreditation or certifications?

Yes

If no, why has the department elected not to pursue accreditation for the program?

The College of Education will consult with the SD DOE and CAEP to determine if the program falls under CAEP purview. If it is agreed the program is within their purview, advanced-level accreditation will be sought.

16. Did the university engage any developmental consultants to assist with the development of the curriculum? Did the university consult any professional or accrediting associations during the development of the curriculum? What were the contributions of the consultants and associations to the development of the curriculum?

Developmental consultants are experts in the discipline hired by the university to assist with the development of a new program, including content, courses, and experiences, etc. Universities are encouraged to discuss the selection of developmental consultants with Board staff.

No, but we did collaborate extensively with CAMSE and SURF.

17. Inclusion of High Impact Practices (HIP) across all undergraduate programs is a strategic priority of the Board of Regents to enhance academic quality and increase student engagement. For associate's and bachelor's degree proposals, which HIPs will faculty embed into the program?

Mark all that apply. To be considered as a HIP program, two or more should be selected and required in the program.

High Impact Practices	Included
Capstone courses and projects	
Collaborative assignments and projects	
Common intellectual experiences	
Diversity/global learning	
ePortfolios	
First year experiences	

High Impact Practices	Included
Internships	
Learning communities	
Service learning, community-based learning	
Writing intensive courses	
Undergraduate research	

18. For associate's and bachelor's degree proposals, discuss how HIPs will be embedded into the program

Your discussion should provide examples and include whether the HIP is required or an optional component. It should also indicate at what point the experience is offered or required. (eg "students will be required to participate in an internship during their third year of enrollment in order to develop skills in... ").

Student Success

This section outlines the university's plan to assess student achievement of the program learning outcomes.

19. Complete the table below to provide evidence of a preliminary assessment plan. Place an asterisk next to assessments that are national or state-level instruments.

Note: It is only necessary to indicate the summative assessment for each outcome, not the formative assessments used throughout the program.

Program Learning Outcome	Course	Summative Assessment
Content Knowledge and Integration	ED 728	STEM Integration Project
Instructional Design	ED 669	Standards-aligned STEM Unit
Research and Evidence-based practice	ED 630 & ED 750	Action Research Project
Leadership and Professional Collaboration	ED 759	PLC/STEM Night Facilitation
Application and Innovation	ED 790	Capstone Project

20. How will outcomes for graduates of the program be assessed?

Outcomes may include employment and placement rates, licensure examination pass rates, acceptance rates to graduate school, student or employer surveys, or other assessments of graduate outcomes.

Similar to existing graduate programs in the COE, this program will assess outcomes for graduates through employer surveys, placement rates, and student satisfaction surveys. These assessments will be integrated into our existing CAEP accreditation processes and schedules.

Duplication and Competition

21. Do any related programs exist at other public universities in South Dakota?
A list of existing programs is available through the university websites and the RIS Reporting: Academic Reports Database. If there are no related programs within the Regental system, indicate ***none.***

Yes, USD offers an MA in Elementary and Secondary Education with STEM specializations.

A. If yes, defend the need for an additional program within the state, Include IPEDS enrollment data and additional data as needed.

SURF is a unique, world-class research facility and we would like to leverage the location and expertise of the researchers there to improve teacher education as well as strengthen the partnership with BHSU. It is also a part of the approved BHSU-SURF Collaborative Work Plan.

B. If yes, would this program be a candidate for Regental system collaboration?

Yes

22. Do any related programs exist at any non-Regental college or university within 150 miles of the university?
List those programs here:

No

A. If yes, use IPEDS to identify the enrollment in those programs.

NA

B. What evidence suggests there is unmet student demand for the proposed program, or that the proposed program would attract students away from the existing program?

NA

Market Demand

This section establishes the market demand for the proposed program (eg Regental system need, institutional need, workforce need). Use the following sources for your data:

- South Dakota Department of Labor & Regulation
- O-Net
- US Department of Labor Projections Central
- SDBOR Workforce and Degree Gap Analysis Report

23. What is the expected growth of the industry or occupation in South Dakota and nationally?
Include the number of openings, as well as the percentage of growth when possible.

In addition to having more qualified STEM instructors in P-12 schools, this program would be tied to SD DOE STEM endorsement, qualifying completers to teach in the CTE STEM career clusters. The SD Department of Labor projects a 5.3% increase in secondary CTE teachers, with an average of 23 annual openings by 2032. Our conversations with local P-12 administrators lead us to believe this number is a severe undercount.

24. What evidence, if any, suggests there are unfilled openings in South Dakota or nationally?

Per the SD DOE, there is a 3-year average of 9.2 FTE unfilled science and math teaching positions, with the number increasing from 6.75 FTE in 2021-2022 to 10.5 FTE in 2023-2024. The 3-year average turnover rate in science and math positions is 136.2 FTE with 124.3 FTE in 2023-2024.

25. What salaries can program graduates expect to earn in South Dakota and nationally?

The expected salaries for program graduates are consistent with average SD teacher salaries.

26. Optional: Provide any additional evidence of regional demand for the program.
e.g. prospective student interest survey data, letters of support from employers, community needs...

See attached BHSU-SURF Collaborative Work Plan

Student Demand

27. Provide evidence of student completers/graduates at that degree level at peer institutions that offer the same/similar program using data obtained from IPEDS.

Peer Institution: Regional and Competitive institutions. Choose programs not already listed in question 11. Use the most recent year available.

University Name	State	Program Name	Number of Degrees Conferred in Program	Total Number of Conferrals at Level (Undergrad or Grad)
USD	SD : South Dakota	MA ELED; STEM specialization	4	530
USD	SD : South Dakota	MA SEED; STEM specialization	3	530
Montana State University	MT : Montana	MS STEM Education	31	479

28. What evidence suggests there is interest from prospective students for this program at the university?

In July 2025, facilitators from both CAMSE and SURF led the SD STEM Leadership Workshop in Pierre, SD for 28 K-12 educators. Kim Webber, Associate Director of CAMSE, administered a survey of participants to gauge interest in a Master's of STEM Education at BHSU. The survey results indicate the following:

- 80% of respondents (12/15) who do not have a Master's degree indicated they would be interested in pursuing a Master's in STEM Education at BHSU.
- Of participants who already earned a Master's degree, 80% (16/20) indicated they would have pursued a Master's in STEM Education from BHSU had it been available at the time.
- Multiple participants indicated they would pursue the degree even though they already earned a Master's degree.

The qualitative feedback included the following:

- "I have an MSCI through BHSU. My district has a lane for earning a 2nd Master's Degree (or Specialist or PhD). I would be interested in a Master's in STEM Ed."
- "I want to emphasize that I would be interested even though I have a Master's degree."
- "I can see several people in my building having interest in this program."
- "I would have loved to do a Masters in STEM."

Enrollment

29. Are students enrolling in this program expected to be new to the university or redirected from existing programs at the university?

New to the university

30. Complete the enrollment worksheet to provide an enrollment projection for the next six academic years

Worksheet Completed	Yes

31. What is the minimum number of students required in this program to break even, with respect to the budget?

Six in the first three years and then 13 in years 4-6 if we hire new faculty.

32. Discuss the assumptions informing your enrollment estimates.
(e.g. current enrollment and trends in similar programs, IPEDS data, recruitment strategies, partnerships)

The major assumptions in the enrollment estimates are that Rapid City Area Schools and smaller districts in West River have roughly half of teacher openings in the state in all content areas and that BHSU will work with 25% of applicants for these positions. The increases are based on a projected 20% increase in students in the program for 3 years and then leveling off in years 4-6.

33. If projected program enrollment is not realized in year two, what actions is the university prepared to take?

If enrollment is not realized in year two, the COE will renew recruitment efforts in our service areas extending to eastern Wyoming, eastern Montana, and NW Nebraska. Additionally, the COE will work with SURF and CAMSE to leverage existing partnerships across the US. The COE will also continue to consult with the COE Advisory Board and the Region Principal groups to ensure the program is meeting the needs of school districts, as well as conduct a curriculum review to ensure students are getting what they need from the program.

34. Discuss the marketing and recruitment plan for the program
Include information on partnerships and pipelines (e.g. articulation agreements with BOTE, collaboration with partner university, community partnerships).

The marketing and recruitment plan will initially focus directly on RCAS and the CAMSE/SURF teacher education pipeline. With the existing footprint of CAMSE, there are several practicing teachers who have completed professional development with CAMSE, and we will leverage these existing relationships in the recruitment process.

Financial Health

35. Complete the budget worksheet to provide a budget projection for the next six academic years.

Worksheet Completed	Yes

Financial Health Summary						
	1st FYxx	2nd FYxx	3rd FYxx	4th FYxx	5th FYxx	6th FYxx
Tuition & Fee Revenues	38559	44985	70691	89970	89970	89970
Program Expenses	35674	35674	35674	87086	87086	87086
NET	2885	9311	35017	2884	2884	2884
Other Supporting Revenues						
NET (Other)	2885	9311	35017	2884	2884	2884

36.Explain the amount and source(s) of any one-time and continuing investments in personnel, professional development, release time, time redirected from other assignments, instructional technology and software, other operation and maintenance expenses, facilities, etc., needed to implement the proposed major.
Address off-campus or distance delivery separately.

Initially, the program will not require any new resources, but with growth, we estimate the need to hire a new faculty member by Year 4 of the program because existing faculty resources will be exhausted. However, this assumption is based on exceeding enrollment targets.

37. If new faculty are not requested, describe how existing faculty will be utilized and indicate whether this action will impact other existing programs.

As the program is established, we will reassign existing faculty courseload and use adjunct instructors affiliated with SURF and CAMSE as available. As the program grows, we estimate that by Year 4, we will have an established need for a new faculty member. Additionally, since 6 courses will be in the existing rotation, we will raise caps and combine sections to accommodate new MS STEM Ed students.

38. Is the university requesting or intending to request permission for a new fee or to attach an existing fee to the program?.

Requesting Permission for Fee?	No
Explanation	

39. Use the table below to describe potential risks to the program's implementation over the next four years.
For each risk, identify the severity (low, medium, high), probability of occurrence (low, medium, high) and the institution's mitigation strategy for each risk.

Risk	Severity	Probability	Mitigation Strategy
Not meeting enrollment targets	Medium	Medium	Work with Enrollment Management, Marketing, SURF, and CAMSE to raise awareness and prompt interest in the program.
Retention rates lower than expected	Medium	Medium	Increase mentorship, advising, and course engagement

External Review

40. If this proposal is for a graduate program, provide information below for at least five potential consultants who may be considered to conduct the external review.

Reviewer Name	Title	Institution
/		
/		
/		
/		
/		

Additional Information

41. (Optional) Use this space to provide pertinent information not requested above that may assist the Board in understanding the proposal.

Approvals

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.*

President of the University	Date
	1/1/1970

Academic Affairs, Provost	Date
	1/1/1970

Finance and Administration, Vice President	Date
	1/1/1970

Enrollment Management, Vice President	Date
	5/5/2026

John D Allred

SOUTH DAKOTA BOARD OF REGENTS
ACADEMIC AFFAIRS FORMS

Proposed Curriculum Summary

UNIVERSITY:	BHSU
PROPOSED PROGRAM:	**MS in STEM Education**

Required General Education Courses Specific to Major
(Please list if any general education courses are required for the proposed major. If not, leave blank.)

Prefix	Number	Course Title *(add or delete rows as needed)*	General Education Goal

Required Support Courses Outside the Major
(Not general education requirements)

Prefix	Number	Course Title *(add or delete rows as needed)*	Credit Hours	New (yes, no)
				Choose an item.
		Subtotal		

Major Requirements

Prefix	Number	Course Title *(add or delete rows as needed)*	Credit Hours	New (yes, no)
ED	630	Educational Collaboration & Research Methods	3	No
ED	728	New and Emerging Technology for Schools	3	No
ED	748	Cultural and Linguistic Diversity in Schools	3	No
ED	750	Action Research in Schools	3	No
ED	790	Seminar/Capstone	3	No
ED	601	Foundations and Issues in Science Education	3	No
ED	609	Contemporary Issues in Science Education	3	No
ED	669	Theory into Practice: Science Education	3	No
ED	749	History, Nature, and Context of Science Education	3	No
ED	759	Advanced Issues: Leadership in Science Education	3	No
		Subtotal	30	

Major Electives: List courses available as electives in the program. Indicate any proposed new courses added specifically for the major.

Prefix	Number	Course Title *(add or delete rows as needed)*	Credit Hours	New (yes, no)
				Choose an item.
				Choose an item.
				Choose an item.
				Choose an item.
		Subtotal		