

SOUTH DAKOTA BOARD OF REGENTS

Academic and Student Affairs
Consent

AGENDA ITEM: 6 – D (2)
DATE: December 7-8, 2022

SUBJECT

New Program Request – USD – BS in Conservation Biology

CONTROLLING STATUTE, RULE, OR POLICY

[BOR Policy 2:23](#) – New Programs, Program Modifications, Curricular Requests, and Inactivation/Termination

BACKGROUND / DISCUSSION

The University of South Dakota (USD) requests permission to offer a BS program in Conservation Biology. The proposed program will replace a current specialization within the current BS in Biology, and will make it a standing major. With all the necessary changes for each current specialization within the biology major, navigating the major has become cumbersome for students and often students are not even aware the specialization exists until coming to USD. The formal separation of this specialization into a free-standing degree will potentially increase enrollment in the major at USD while also better reflecting the focus of study for the student.

The Intent to Plan for this program was approved by the Executive Director in August, per BOR Policy 2:23.

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 Full Proposal Summary: USD – BS in Conservation Biology

DRAFT MOTION 20221207_6-D(2):

I move to authorize USD to offer a BS in Conservation Biology, as presented.

**Full Proposal – BS Conservation Biology
University of South Dakota**

BOR Recommendation: The Board of Regents Academic Affairs and the Executive Director support the program request. Whereas this program is currently offered as a specialization within the BS in Biology, approving this program will allow students to highlight their focus of study in the name of their major.

Program Description:

Students will develop research and critical thinking skills as they tackle concepts such as climate change, biodiversity loss, and natural resource management. The program includes hands-on learning opportunities, such as a field ecology course that involves designing and conducting an ecological field research study. Students engage in research experiences and gain access to facilities that grow their knowledge in biodiversity allowing them to pursue careers in sustainability, conservation, or ecology.

The proposed degree replaces the current specialization within the current BS in Biology. This degree will continue the courses currently indicated in the specialization requirements.

Strategic Impact:

USD Strategic Impact: This program is aligned with the institutional mission of educating students who are well-prepared for a global and complex world with classroom experiences that are robust, experiential, and practical. Within the mission of the College of Arts and Sciences, this undergraduate major will support our mission of producing graduates who will solve the future’s most pressing challenges. These problems extend greatly into conserving local resources and protecting biodiversity. Training in this program allows students to obtain the necessary skills and knowledge to begin successful careers in this field.

BOR Strategic Impact: The proposed program also aligns with the Board of Regents Strategic Plan 2022-2027, Goal 3: Academic Excellence, Student Outcomes, Educational Attainment, and Goal 4: Workforce and Economic Development. USD is committed to four key priority areas – student success, academic quality and performance, research and economic development, and affordability and accountability – and ties each to a firm set of outcomes. This program will connect to the BOR’s strategic plan and is aligned with the institutional mission of educating students who are well-prepared for a global and complex world with classroom experience that is robust, experiential, and practical.

Program Summary:

The Classification of this Program will be 26.1307 (Conservation Biology) with a degree of Bachelor of Science. The intended start date will be Fall 2023. This program will be assigned to the College of Arts and Sciences and the Department of Biology. This program is proposed to be an on-campus program not delivered through distance education.

In its current format as a specialization within the Biology major, students refer to themselves as “Conservation Biology Majors.” Creating a degree specifically named for students’ intended careers will allow better opportunities for students to progress in career and graduate education paths. Additionally, focusing the major on a subtopic of biology reduces requirements in topics of biology that might not directly benefit the topic of interest. Changes that have been implemented in the specialization over the years designed to allow students to focus on the conservation subtopic have made navigating degree requirements more complicated for students and advisors. Creating a

standing major will significantly streamline course requirements and allow students a clear path to graduation.

Duplication and Competition:

This degree will replace the existing “Conservation and Biodiversity Specialization” within the USD Biology degree. SDSU offers degrees in Wildlife and Fisheries Sciences, Conservation Planning and Park Management, and a Specialization in Rangeland Ecology and Management within the Ecology and Environmental Science program. SDSU supports USD’s request to move Conservation Biology from a specialization to a stand-alone program.

Duplication within South Dakota:

Regental Universities:

University	Conferred Degrees in Related Fields	Total Number of UG Conferrals (All University)
South Dakota State University <ul style="list-style-type: none"> • <i>Wildlife and Fisheries Sciences</i> • <i>Conservation Planning and Park Management</i> • <i>Rangeland Ecology and Management (Specialization)</i> 	43	1977

Private SD Universities:

University	Conferred Degrees in Related Fields	Total Number of UG Conferrals (All University)
No comparable programs	0	0

Total SD Sum of Peer Findings:

University	Conferred Degrees In Related Field	Total Number of UG Conferrals (All University)
Total	43	1977

University of South Dakota Competitive Peer Research:

Research suggests that the student demand with competitor peers supports the addition of this program for the University of South Dakota. Student demand is one of the critical elements for meeting the needs of the student population while increasing the pipeline for workforce demands. The Board of Regents strategic plan Goal 4 supports the increase of programming that will be additive to educational attainment in the Stem field.

Outside of South Dakota Competitor University Peers to Institution:

University	Conferred Degrees in Related Fields	Total Number of UG Conferrals (All University)
University of Minnesota – <i>Fisheries, Wildlife and Conservation Biology</i>	45	9414

University	Conferred Degrees in Related Fields	Total Number of UG Conferrals (All University)
University of North Dakota – <i>Fisheries and Wildlife Biology</i>	5	2097
University of Montana – <i>Wildlife Biology</i>	64	1365
University of Wyoming – <i>Natural Resources and Conservation</i>	22	2364

Workforce Outlook/State Need:

To meet the demands of the job market to serve our students, this specialization has been updated over the past decade. With all the necessary changes for each current specialization within the biology major, navigating the major has become cumbersome for students and often students are not even aware the specialization exists until coming to USD. The formal separation of this specialization into a free-standing degree will potentially increase enrollment in the major at USD while also better reflecting the focus of study for the student. A recent analysis of this job market shows a steady need for professionals in this field with a projected growth of 0.3% over the next 10 years (per EMSI data 3/4/22).

Student Learning Outcomes:

Individual Student Outcome (Same as in the text of the proposal)	Program Courses that Address the Outcomes						
	BIOL 151	BIOL 153	BIOL 311/L	BIOL 280/L	BIOL 420/L	BIOL 473	Capstone
Students will demonstrate the ability to apply knowledge of biological concepts to solve novel problems or develop hypotheses appropriate to conservation.				X			X
Students will demonstrate the ability to identify, use, and cite scientific literature appropriate for the conservation thesis being studied (ecology and evolution).			X	X	X	X	X
Students will demonstrate the ability to collect and appropriately analyze data associated with a theoretical or applied conservation question				X	X		
Students will understand the core concepts relevant to an understanding of biology as a discipline.	X	X	X			X	X

High Impact Practice – Capstone Strategic Plan Goal 3:

Ample research documents the relationship between [high-impact practices](#) (such as capstone experiences, internships, undergraduate research, service-learning, global learning, first-year seminars, and learning communities) and increased student retention, engagement, and degree completion (Kuh 2008; Eynon & Gambino 2016; AAC&U n.d.). The proposed program in Conservation Biology includes multiple high-impact student learning opportunities including a capstone course. USD writes that the Conservation Biology capstone course “requires students to integrate knowledge across a variety of topics and apply it with a scientific approach.”

Projected Enrollment:

ESTIMATES	FISCAL YEARS*					
	1st Year	2nd Year	3rd Year	4th Year	5th Year	6th Year
Students new to the university	2	5	10	10	10	10
Students from other university programs	2	5	10	10	10	10
Students off-campus or distance continuing students	--	--	--	--	--	--
Total students in the program (fall)	34	37	47	55	63	71
Program credit hours (major Courses)**	296	317	410	496	585	656
Graduates	7	10	12	12	12	12
<p><i>*Does not include current fiscal year.</i></p> <p><i>**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.</i></p>						

Projected Revenue/Expenses:

FINANCIAL HEALTH SUMMARY							
	1st	2nd	3rd	4th	5th	6th	
	FY24	FY25	FY26	FY27	FY28	FY29	
TUITION & FEE REVENUES	80,409	86,114	111,378	134,740	158,917	178,205	
PROGRAM EXPENSES	62,448	62,771	63,104	63,448	63,801	64,165	
NET (T&F REVENUES LESS PROGRAM EXPENSES)	17,961	23,343	48,273	71,293	95,116	114,040	
OTHER SUPPORTING REVENUES	-	-	-	-	-	-	
NET AFTER OTHER SUPPORTING REVENUES	17,961	23,343	48,273	71,293	95,116	114,040	