SOUTH DAKOTA BOARD OF REGENTS
ACADEMIC AFFAIRS FORMS

New Specialization

UNIVERSITY:	**SDSU**
TITLE OF PROPOSED SPECIALIZATION:	**Natural Resource Management**
NAME OF DEGREE PROGRAM IN WHICH SPECIALIZATION IS OFFERED:	**Biological Sciences (M.S. and Ph.D.)**
INTENDED DATE OF IMPLEMENTATION:	**2019-2020 Academic Year**
PROPOSED CIP CODE:	**03.0101**
UNIVERSITY DEPARTMENT:	**Natural Resource Management**
UNIVERSITY DIVISION:	**Graduate School**

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.

Barry H. Dunn

Institutional Approval Signature
President or Chief Academic Officer of the University

6/26/2019
Date

1. Level of the Specialization:

Baccalaureate ☐ Master's ☒ Doctoral ☒

2. What is the nature/purpose of the proposed specialization?

South Dakota State University (SDSU) requests authorization to offer a specialization in Natural Resource Management for the M.S. and Ph.D. in Biological Sciences. Biological sciences is a broad field that encompasses a wide range of career tracks. Current students in the Department of Natural Resource Management are trained in ecology, conservation, and management. Acknowledging this training with a Natural Resource Management (NRM) Specialization will better acknowledge their education and will make them more competitive for careers in Natural Resource Management.

The Department of Natural Resource Management is already training M.S. and Ph.D. graduate students broadly under a Natural Resource Management umbrella in ecology, environmental sciences and range areas of expertise with a focus on basic and applied research. This request will help to readily identify the graduate students both internally and externally to others (potential employers, other academic institutions, etc.), thus increasing overall visibility.

The University does not request new state resources.

3. Provide a justification for the specialization, including the potential benefits to students and potential workforce demand for those who graduate with the credential.[1]

Graduates of this program will earn jobs as Natural Resource Managers for a variety of State and Federal agencies, Non-Government Organizations, and private industry. Past graduates from the program are currently working for the SD Department of Game, Fish and Parks, SD Department of Environment and Natural Resources, US Fish and Wildlife Service, US Environmental Protection Agency, US Natural Resource Conservation Agency, Pheasants Forever, Ducks Unlimited, etc.

Careers in Natural Resource Management require specialized training to address complex problems. For example, a Natural Resource Grand Challenge in South Dakota is the general decline of grassland habitat and resulting decline in grassland species such as pheasants. In response, South Dakota developed the Habitat Pays program. Habitat Pays is an effort to partner with private landowners with State and Federal programs to enhance habitat on their property. This program was designed by natural resource specialists and includes habitat specialists with advanced training in Natural Resource Management. SDSU's program trains students for careers such as these. In fact, many of the current biologists and managers in the Habitat Pays program were trained in the Department. Allowing these students to acknowledge their training with a specialization in NRM will better reflect their education and differentiate them from students more broadly trained in Biology.

Job placement for graduate students in the Department of Natural Resource Management is above 80%, and the outlook for future jobs is very positive. Department of Labor Statistics estimates that the number of jobs in Environmental Science Specialists was 89,500 in 2016, and this field is projected to grow 11%.[2] Similarly, the number of jobs for Conservation Scientists and Foresters was 34,600 in 2016,and is projected to grow 6%.[3]

4. List the proposed curriculum for the specialization (including the requirements for completing the major – *highlight courses in the specialization*):

Biological Sciences (M.S.) – Natural Resource Management Specialization

Prefix	Number	Course Title	Credit Hours	New (yes, no)
NRM	790	Seminar	2	No
		STAT courses numbered 500 level or higher	3	No
		6 additional course credits from BOT, EES, NRM, RANG, WL numbered 500 or higher	6	No
Select one of the following options:				
Option A - Thesis				

[1] For workforce related information, please provide data and examples; data sources may include but are not limited to the South Dakota Department of Labor, the US Bureau of Labor Statistics, Regental system dashboards, etc.
[2] Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*, Environmental Scientists and Specialists, on the Internet at https://www.bls.gov/ooh/life-physical-and-social-science/environmental-scientists-and-specialists.htm (visited *March 04, 2019*).
[3] Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*, Conservation Scientists and Foresters, on the Internet at https://www.bls.gov/ooh/life-physical-and-social-science/conservation-scientists.htm (visited *March 20, 2019*).

Prefix	Number	Course Title	Credit Hours	New (yes, no)
BIOS	798	Thesis	5-10	No
		Electives	9-14	No
Option B – Research/Design Paper				
NRM	788	Master's Research Problems/Project	2-3	No
		Electives	18-19	No

Total number of hours required for completion of specialization	6
Total number of hours required for completion of major	30-32
Total number of hours required for completion of degree	
Option A	30
Option B	32

Biological Sciences (Ph.D.) – Natural Resource Management Specialization

Prefix	Number	Course Title	Credit Hours	New (yes, no)
		60 Credit Plan		
GSR	601	Research Regulations Compliance	1	No
NRM	790	Seminar	2	No
BIOS	898D	Dissertation	30-40	No
		STAT courses numbered 500 level or higher	3	No
		Additional graduate courses approved by advisor and committee and noted on the student's Plan of Study	14-24	No
		90 Credit Plan		
GSR	601	Research Regulations Compliance	1	No
NRM	790	Seminar	2	No
BIOS	898D	Dissertation	40-50	No
		STAT courses numbered 500 level or higher	3	No
		Additional graduate courses approved by advisor and committee and noted on the student's Plan of Study	34-44	No

Total number of hours required for completion of specialization	14-44
Total number of hours required for completion of major	60/90
Total number of hours required for completion of degree	60/90

5. Delivery Location[4]

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., UC Sioux Falls, Capital University Center, Black Hills State University-Rapid City, etc.) or deliver the entire program through distance technology (e.g., as an on-line program)?

	Yes/No	*Intended Start Date*
On campus	Yes	**2019-2020 Academic Year**

[4] The Higher Learning Commission (HLC) and Board of Regents policy requires approval for a university to offer programs off-campus and through distance delivery.

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

	Yes/No	*If Yes, identify delivery methods*[5]	*Intended Start Date*
Distance Delivery (online/other distance delivery methods)	No		

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)? [6]

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

[5] Delivery methods are defined in AAC Guideline 5.5.

[6] This question responds to HLC definitions for distance delivery.