SOUTH DAKOTA BOARD OF REGENTS
ACADEMIC AFFAIRS FORMS

New Specialization

UNIVERSITY:	**SDSU**
TITLE OF PROPOSED SPECIALIZATION:	**Veterinary Medicine**
NAME OF DEGREE PROGRAM IN WHICH SPECIALIZATION IS OFFERED:	**Biological Sciences (M.S.)**
INTENDED DATE OF IMPLEMENTATION:	**2021-2022 Academic Year**
PROPOSED CIP CODE:	**51.2401**
UNIVERSITY DEPARTMENT:	**Veterinary & Biomedical Sciences**
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.

	5/6/2020
Institutional Approval Signature	Date
President or Chief Academic Officer of the University	

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 Veterinary Medicine for the M.S. in Biological Sciences. The Veterinary Medicine Specialization will specifically target students enrolled in the new (proposed) Professional Program in Veterinary Medicine (PPVM). The PPVM is a non-degree program at SDSU, providing the first two years of coursework towards the Doctor of Veterinary Medicine (DVM) degree, which will be completed at the University of Minnesota College of Veterinary Medicine. Students admitted to the PPVM will be allowed to dual-enroll in the Veterinary Medicine Specialization of the Biological Sciences M.S., thus having the opportunity to simultaneously earn an M.S. degree while completing the PPVM coursework needed for transitioning to the University of Minnesota to complete the final two years of the DVM degree.

   The proposed specialization will provide students with research training and experience to complement their professional training. It will also provide these students with an SDSU

academic credential before moving on to the University of Minnesota to complete the DVM. To earn the M.S. degree, students will be required to complete a research experience or thesis, likely during their summer between Years 1 and 2. All other coursework required for the M.S. specialization will be courses that are also needed for the PPVM.

Students interested in a more traditional graduate program in veterinary and biomedical sciences, but not in the PPVM-DVM professional pathway, can apply to the existing M.S. in Biological Sciences with an emphasis in Veterinary Microbiology or Veterinary Pathology. Students will not be admitted to the proposed Veterinary Medicine Specialization unless they are first admitted to the PPVM.

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

The proposed specialization, in conjunction with the PPVM, provides a clear pathway to career opportunities related to animal health. According to the U.S. Bureau of Labor Statistics, the projected employment growth rate from 2018-2028 for employment of veterinarians is 18%, far exceeding the average for all occupations (5%).[1] The national average annual wage of veterinarians was $105,240 and the national median wage was $93,830. The 2018 average annual salary for veterinarians in South Dakota was $100,050, exceeding that of all adjoining states.

The dual MS-PPVM program in veterinary medical education meets a regional need for additional veterinarians, contributes to the continued growth of the animal agriculture industry, and creates a direct pathway to veterinary careers for South Dakota students.

The M.S. specialization provides a value-added dimension of research training and experience to PPVM students, which will strengthen their diagnostic abilities as veterinarians and expand potential career opportunities related to animal health research and food safety.

Students will not receive an academic credential from SDSU by completing only the PPVM. The PPVM paves the way for completion of the DVM degree, which will be awarded by the University of Minnesota. **The proposed specialization provides an opportunity for these students to earn a master's degree from SDSU, participate in commencement ceremonies, and become alumni of SDSU. These are very important and beneficial outcomes to both the students and SDSU.**

In the event a student does not complete the entire PPVM, the student may be allowed to remain in the Veterinary Medicine Specialization and earn a Master's degree, assuming adequate academic performance and that all requirements for the M.S. specialization are completed. Such students would have good preparation for a career related to animal health (e.g., research laboratory technician, sales or technical services representative for an animal pharmaceutical or pet food company).

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[1] https://www.bls.gov/ooh/Healthcare/Veterinarians.htm#tab-1

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

Biological Sciences (M.S.) – Veterinary Medicine Specialization

Prefix	Number	Course Title	Credit Hours	New (yes, no)
VET	606	Critical Scientific Reading	1	Yes
VET	645	Clinical Epidemiology	2	Yes
VET	646	Public Health	2	Yes
Select one of the following options:				
Option A - Thesis				
BIOS	798	Thesis	5-10	No
		VET Electives	15-20	Yes
Option B – Research/Design Paper				
VET	788	Master's Research Problem	3	No
		VET Electives	24	Yes

Total number of hours required for completion of specialization	5
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

5. Delivery Location[2]

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	**2021-2022 Academic Year**

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

	Yes/No	*If Yes, identify delivery methods[3]*	*Intended Start Date*
Distance Delivery (online/other distance delivery methods)	No		

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[2] The Higher Learning Commission (HLC) and Board of Regents policy requires approval for a university to offer programs off-campus and through distance delivery.
[3] Delivery methods are defined in AAC Guideline 5.5.

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)? [4]

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

The Veterinary Medicine Specializatoin will be available through face-to-face delivery.

6. **Additional Information:**

Admissions Process
Requirements and procedures for admitting students will closely follow those of the University of Minnesota DVM program: https://vetmed.umn.edu/education/dvm/requirements. Students will submit applications through the Veterinary Medical College Application Service of the Association of American Veterinary Medical Colleges: AAVMC-VMCAS.

Following screening of initial applications sent through VMCAS, selected applicants will be invited to campus for a mandatory face-to-face "Behavioral Interview". Following interviews, offers of admission will be extended to successful applicants, while a second tier of applicants may receive a wait-list offer. Applicants on the wait list may be extended offers of admission as seats become available. Delayed admission deferments may be granted in cases of extenuating circumstances if approved by the Admissions Committee.

Admissions Requirements
GRE: Required
TOEFL: Required score of 525 paper-based, 71 Internet-based
IELTS: 5.5

- An electronic application for admission must be submitted through VMCAS.
- Official copies of all transcripts must be sent directly to VMCAS.
- Three electronic Letters of Reference must be submitted as part of the VMCAS application on behalf of the applicant. It is strongly recommended that at least one letter is written by a DVM.
- The Graduate Record Exam (GRE) must be taken no more than 5 years prior to application submission, and scores must be sent directly to SDSU.
- Specific prerequisite coursework must be completed prior to enrollment. Prerequisite courses must be equivalent to the SDSU courses indicated in this planner: Approved Preveterinary Coursework. Students from other universities will be directed to follow the comprehensive area college prerequisite guides developed by the University of Minnesota for a list of approved prerequisites.

Student Learning Outcomes and Transferable Skills
Students will:

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

- Demonstrate understanding of central biological principles and mechanisms that underlie animal health and disease from the molecular to histologic to gross levels.
- Demonstrate knowledge of normal function and behavior, pathophysiology, clinical manifestations, diagnosis, treatment, and management or control of important domestic and foreign animal diseases.
- Demonstrate understanding of food safety, zoonotic disease, and public health issues.
- Retrieve and integrate information from the veterinary literature. (*Transferable Skills: Career Preparedness; Lifetime Learning*)
- Ability to understand and interpret research related to mechanisms of disease, diagnostic technology, and treatments. (*Transferable Skills: Career Preparedness, Ethics – Moral Decision Making/ Moral Reasoning*)