

Montana Board of Regents CURRICULUM PROPOSALS

1. Overview

A cooperative veterinary educational program at Montana State University (MSU) is needed to proactively address current trends in veterinary medical education and veterinary workforce projections both within Montana and the Nation. Cooperative veterinary medical programs are being developed in the United States, including two in the western states. If current veterinary schools develop cooperative programs with individual states, access to admission seats for Montana students may change. In addition, the real decline in state support for college of veterinary medicine faculty and tuition support from other states makes it increasingly difficult to support the education of DVMs, provide specialty training and graduate research experiences. This increasing level of uncertainty has the potential to impact future Montana residents. A cooperative program with MSU and Washington State University (WSU) College of Veterinary Medicine (CVM) will solidify access for Montana students to veterinary education. A partnership program will decentralize the educational process and allow shared resources of faculty and facilities in universities and communities across the Northwest. A National Academy of Sciences study addresses many facets of this issue and provides additional insight into these global issues which we have also addressed with Montana examples and MSU program strengths http://www.nap.edu/catalog.php?record_id=13413.

As further perspective, WICHE veterinary medicine school slots were historically allotted on a contract 'guarantee quota' to each receiving program. This process coupled with growing state support provided budget stability to the veterinary schools. This changed as state institutional support for higher education decreased in the 1990s and support for WICHE veterinary slots in the sending states was also reduced. Veterinary medicine quotas or guarantees were at 80 in the past, but currently are funded at only 43. During this time students could choose which veterinary school they would attend. These dynamics created further uncertainties to CVM programs. CVMs are striving to share resources, while securing more reliable and consistent numbers of supported students.

2. Provide a one paragraph description of the proposed program. Be specific about what degree, major, minor or option is sought.

This proposal is not seeking a new MSU curriculum or degree. We seek to develop a Cooperative Program in Veterinary Medical Education (CPVME) between the College of Agriculture at Montana State University-Bozeman and the College of Veterinary Medicine at Washington State University. The 4-year cooperative program would result in a Doctor of Veterinary Medicine (DVM) degree from Washington State University. The program would be described as a 1+3 cooperative program where the first year of the Doctor of Veterinary Medicine program would be taught at MSU and the remaining 3 years at WSU. Approval of the proposed program is contingent upon funding.

3. Need

A. To what specific need is the institution responding in developing the proposed program?

Montana is challenged to provide rural areas with veterinarians, specifically food animal veterinarians. Entry into an accredited school of veterinary medicine is very competitive and is limited by space and residency. Montana residents can gain access to veterinary programs through WICHE's PSEP program. Currently, Montana has no input on selection of the students into the veterinary schools and sends a significant support fee to the receiving state to cover the costs of educating our residents in each of the four years they are enrolled. Cooperative Programs of Veterinary Medical Education are being considered

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at several veterinary schools. As these programs are developed, it will increase the existing class size at the veterinary schools. Entering into a 1+3 CPVME with WSU will also allow Montana to have direct input into the admissions committee. Montana General Funds spent on the first year of education will remain in Montana. It will also add value to the veterinary education by directly leveraging faculty and facility resources between the universities.

B. How will students and any other affected constituencies be served by the proposed program?

This will solidify access for Montana residents to an education in veterinary medicine. Students will remain in the State for an additional year and the resources of both universities will add value to their education. The fourth year clinical rotations will incorporate veterinary practices in Montana, which could lead to job recruitment for food animal veterinarians in these underserved areas. Involving livestock producers in the establishment of a veterinary school program will also be a positive investment in the health of American citizens, the well-being of the nation's food-animal industry and the health of wildlife resources.

C. What is the anticipated demand for the program? How was this determined?

It is anticipated that 10 Montana students would be admitted through Montana (MSU) to WSU. The State currently supports nine WICHE positions annually. The WSU admissions director indicated that about 13-15 applicants from Montana who apply for WICHE positions at WSU each year can be categorized as high quality applicants. Therefore, attracting 10 high quality applicants from Montana seems achievable, with potential for expanding this number in the future.

4. Institutional and System Fit

A. What is the connection between the proposed program and existing programs at the institution?

Over the last nine plus months, faculty and administrators have explored the feasibility of a CPVME with MSU and WSU. Site visits by the feasibility team have occurred and regular communications and discussions have taken place with key faculties. In evaluating if the first year of the CPVME could be taught at MSU, the feasibility team took advantage of MSU's long and successful history of teaching first year medical students within the WWAMI MD program. However, planning at MSU proceeded with distinct focus on teaching standalone DVM courses. The following courses with some topical overlap were identified after comparison of course syllabi: Immunology, Neurobiology, Cell physiology and Cell anatomy.

B. Will approval of the proposed program require changes to any existing programs at the institution? If so, please describe.

There may be opportunities to provide a unique learning experience for both the MD and DVM students and address the "One Medicine" concept that could be integrated into this regional program at MSU.

C. Describe what differentiates this program from other, closely related programs at the institution (if appropriate).

This proposed program will be a 1+3 veterinary medical program whereas the WWAMI program is a human medical program.

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D. How does the proposed program serve to advance the strategic goals of the institution?

MSU and WSU are land grant institutions accustomed to providing access and engagement across numerous professional and economic sectors to their citizens. In addition, both institutions are required by USDA to participate in regional research programs, so collaborative partnerships are common.

Goal 1: Access & Affordability

Increase the overall educational attainment of Montanans through increased participation, retention and completion rates in the Montana University System.

- 1.) Access to a school of veterinary medicine for Montana residents will be strengthened. Should the veterinary schools limit enrollment of WICHE students, Montana residents will find themselves in the position of applying to programs as a “non-resident”. Non-resident admission rates are much lower. If admission is granted, the full tuition fees for non-resident students are currently approaching \$50,000 per year.
- 2.) Ten students a year will have guaranteed acceptance into a veterinary program.
- 3.) The presence of a veterinary program at MSU will increase recruitment rates to the Montana University System in overall related fields and degrees such as biotechnology, equine science, animal science, microbiology and other life sciences.
- 4.) Montana students in the CPVME program will remain in Montana for this first year. This will allow students to retain the positions of employment, which reduces the amount of money the students are required to borrow.
- 5.) Undergraduate students seeking admission into the CPVME will be retained at a higher rate as they seek admission.
- 6.) Students with a clear path into a Montana veterinary program will not be seeking to change their residency status to another state to improve their chances of admission.
- 7.) Exposure of undergraduate students interested in veterinary medicine will increase overall enrollment in other programs related to the field, particularly with an increase in veterinary research programs for both undergraduate and graduate students.

Goal 2: Workforce & Economic Development

Increase responsiveness to workforce development needs by expanding and developing programs in high demand fields in the state.

- 1.) Development of the CPVME program will increase the quality of higher education at MSU through the interactions between the fields of veterinary medicine, as well as basic and applied life science programs. This will prepare students for success in life through quality higher education.
- 2.) Participation by Montana veterinary industry representatives in the admissions committee for selection of Montana residents admitted to the program will increase the potential return rates of graduates in veterinary medicine to the rural underserved areas of Montana.
- 3.) Development of internships and preceptorships with Montana veterinary hospitals and practices will improve recruiting DVM’s (Montanans and others) into these areas. Students who have worked in certain areas are more likely to seek employment and return to these areas.
- 4.) The creation of the CPVME program will directly establish collaborative programs among

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institutions in the northwest, the private sector, and the state to expand research, technology transfer, and programs in land grant universities.

- 5.) The creation of the CPVME program will support faculty, staff, and students in the MUS who are engaged in science and technology research and graduate education that will help build and diversify Montana's economic future. The MUS research enterprise will also build partnerships with communities, businesses, and other educational entities to help align science education and research with pressing social and economic challenges facing the veterinary profession.

Goal 3: Efficiency & Effectiveness

Improve institutional and system efficiency and effectiveness.

The current system of education of Montana veterinary students requires them to leave Montana and the MUS system. Opportunities to include those students in research and community engagement are lost. This program will utilize an education network that provides high speed telecommunication capabilities that link MUS institutions, provide connectivity to national research and education networks, and expand the reach of the MUS to remote areas of Montana as well as the WSU CVM.

- E. Describe the relationship between the proposed program and any similar programs within the Montana University System. In cases of substantial duplication, explain the need for the proposed program at an additional institution. Describe any efforts that were made to collaborate with these similar programs; and if no efforts were made, explain why. If articulation or transfer agreements have been developed for the substantially duplicated programs, please include the agreement(s) as part of the documentation.**

There are no other Cooperative Programs in Veterinary Medicine Education in Montana.

Currently, Montana provides funding for nine students to attend veterinary medical programs outside of Montana through WICHE. This proposed cooperative program in veterinary medical education would require funding for infrastructure, staff, operations, and educational support for 10 additional students.

5. Program Details

- A. Provide a detailed description of the proposed curriculum. Where possible, present the information in the form intended to appear in the catalog or other publications. NOTE: In the case of two-year degree programs and certificates of applied science, the curriculum should include enough detail to determine if the characteristics set out in Regents' Policy 301.12 have been met.**

YEAR 1 FIRST SEMESTER (WSU curriculum to be taught at MSU; [lecture-lab])

510 Veterinary Microscopic Anatomy 4 (3-3) Prereq first year in veterinary medicine or graduate student. Microscopic functional morphology of the cell, tissues, and selected organ systems of domestic animals. S, M, F grading.

511 Veterinary Anatomy I 5 (0-15) Prereq veterinary medicine student or graduate student. Detailed macroscopic functional morphology of the dog with comparison to other domestic animals; developmental anatomy of selected organ systems. S, M, F grading.

513 Veterinary Cell Physiology 4 Prereq veterinary medicine student or graduate student. Cell physiology focusing on endocrine, paracrine, and neurotransmission signaling processes, transcriptional and translational control, and methodologies relevant to medicine. S, M, F grading.

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568 Animal Handling and Animal Agriculture Orientation 2 (1-3) Prereq veterinary medicine student. Restraint procedures, production aspects and the social issues of agricultural animals seen by veterinarians and career opportunities associated with them

586 Principles of Surgery 1 Prereq veterinary medicine student. Principles of surgery for the professional veterinary student.

500 Animals, Society, and the Veterinarian 1 Active participation in activities designed to enhance personal growth, character development and leadership skills

598 Introduction to Clinics 1 (0-3) Prereq veterinary medicine student. Introduction to the practice of clinical veterinary medicine and surgery within the Veterinary Teaching Hospital including records, presentation and protocol.

Special Topics 3 From supplemental courses presented below and other MSU courses to be developed.

YEAR 1 SECOND SEMESTER

512 Veterinary Anatomy II 4 (1-9) Prereq V M 511P. Detailed macroscopic functional morphology of domestic animals. S, M, F grading.

520 Veterinary Physiology 5 (4-3) Prereq V M 510P. Physiology of domestic animals. Cooperative course taught by WSU, open to UI students (VS 511). S, M, F grading.

521 Introduction to Veterinary Neurology 3 (2-3) Prereq V M 510P. Neuroanatomical and neurophysiological bases of veterinary neurology, emphasizing central and peripheral sensory and motor systems. S, M, F grading.

534 Veterinary Immunology 3 (2-3) Prereq veterinary medicine student or graduate student in veterinary science. Immunology for the professional veterinary student. S, M, F grading.

545 General Pathology 3 (2-3) Prereq V M 520P. Structural and functional alterations in disease; elementary oncology. Cooperative course taught by WSU, open to UI students (VS 445).

580 Basic Nutrition 1 Prereq veterinary medicine student. Introduction to the concepts of basic nutrition designed for the first year veterinary student

YEAR 2 (WSU CVM instruction)

FIRST SEMESTER

- **522 Fundamentals of Pharmacology 2** Prereq veterinary medicine student. Pharmacokinetics and fundamentals of drug action
- **535 Veterinary Virology 3** Prereq veterinary medicine student or graduate student in veterinary science. Virology for the professional veterinary student. S, M, F grading.
- **536 Veterinary Bacteriology 4 (3-3)** Prereq veterinary medicine student. Bacteria that produce disease in animals. S, M, F grading.
- **546 Systemic Pathology 6 (5-3)** Prereq V M 545P. Principles of system and organ response to injury, and the effects of injury/disease on the animal host.
- **589 Clinical Pathology 3 (2-3)** Prereq veterinary medicine student. Laboratory diagnostic procedures and interpretation

SECOND SEMESTER

- **522 Fundamentals of Pharmacology 2** Prereq veterinary medicine student. Pharmacokinetics and

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fundamentals of drug action.

- **537 Veterinary Parasitology 4 (3-3)** Prereq veterinary medicine student. Arthropods, protozoa, and helminths of veterinary importance; their host-parasite relationship and control.
- **543 Veterinary Medicine and Human Health 2** Prereq veterinary medicine student. Preparation for veterinary students in public health and food hygiene
- **561 Clinical Specialties V 1-4** Prereq veterinary medicine student. This course includes clinical disciplines that are not considered core internal medicine, such as ophthalmology and dermatology.
- **585 Epidemiology 2** Prereq veterinary medicine student. Minimally quantitative survey in which health is framed as a population phenomena
- **587 Clinical Anesthesiology 2 (1-3)** Prereq veterinary medicine student. Clinical anesthesiology for the professional veterinary student. S, M, F grading.
- **588 Radiology 3 (2-3)** Prereq veterinary medicine student. Introduction to radiography and diagnostic radiology.

YEAR 3 (WSU CVM instruction)

VM 569 Agr. An. Med I	3.5(3-1.5)	VM 552 Small An. Med II	3(3-0)
VM 578 Equine Med I	3(3-0)	VM 570 Agr. An. Med. II	3(3-0)
VM 551 Small An. Med. I	5(5-0)	VM 572 Large An. Surgery	2(2-0)
VM 553 Small An. Surg.	3(3-0)	VM 571 Theriogenology	4(3-3)
VM 554 Surgery Lab	1(0-3)	VM 590 Clinical Nutrition	1(1-0)
VM 524 Clinical Vet. Pharm.	3(3-0)	VM 576 Exotic & Emerg. Dz	1(1-0)
VM 502 Comm. Skills	0.5(0-1.5)		

YEAR 4 (WSU CVM instruction)

Clinical rotations to be taught at various campus and remote locations as determined by WSU CVM. Montana veterinarians will develop the Student Initiated Professional Experience and the Guided Preceptorship for students enrolled in the 4th year curriculum. These rotations will be available to any 4th year veterinary student and thereby increase the recruitment of new DVM graduates regardless of their residency into areas of underserved rural Montana.

Course credit in the 4th year is earned for core courses and supplemental core courses: **Core clinical courses**, all students take these rotations (29 credits); **Supplemental core clinical courses**, a finite list of courses from which each student must select and complete a defined number of courses (14 credits). Addition of a required 1 credit course in Scientific Writing and Presentation sums to a total of 44 credits in the 4th year. Many services that support courses in the core list allow students to take subsequent rotations for supplemental core credit, as shown in section A.

Sections

- A. 4th year courses
- B. Existing core clinical rotations
- C. Supplemental core and off-CVM rotations

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D. Calculations

E. Proposed (additional) Personnel Needs

4th year courses. 4th year core courses:

VM 600P 1 Cr. Scientific Writing/Presentation

VM 605P 2 wks Small Animal Community Practice

VM 606P 2 wks Small Animal Referral/Internal
Medicine

VM 607P 2 wks Small Animal Soft Tissue/General
Surgery

VM 608P 2 wks Small Animal Orthopedic Surgery

VM 609P 2 wks Small Animal Neurology

VM 675P 2 wks Large Animal ICU

VM 674P 1 wk Small Animal ICU

VM 650P 3 wks Anesthesia

VM 628P 2 wks Equine Surgery

VM 629P 2 wks Equine Medicine

VM 656P 2 wks Diagnostics/Necropsy

VM 699P 1 wk Holiday Extension

VM 691P 4 wks Guided Preceptorship

VM 690P 2 wks Student Initiated Professional
Experience

4th year supplemental core courses:

VM 630P 4 Ag Animal Internal Med and Surgery

VM633.01P 2 Ag Animal, Intro to Clinics

VM 698.01P 2 Anesthesia, Advanced**

VM 694P 2 Avian Medicine, Puyallup, WA

VM 635P 2-4 Caine Center-General Food Animal

VM 633P 2 Caine Center-Lambing Management

VM 633 P 2 Caine Center – Small Ruminant

VM 633P 2 Caine Center – Beef Calving

VM 633P 2 Caine Center – Feedlot

VM 633P 2-4 Caine Center – Dairy

VM 633P 2 Caine Center – Cow/Calf Production Med.

VM 633P 2-4 Caine Center – Adv. Repro.Tech- Bovine

VM 633P 1-2 Caine Center – Special Project

VM 621P 2 Cardiology

VM 657P 1 Clinical Pathology

VM 615.02P 1 Dentistry/Dermatology

VM 615.03P 1 Dentistry/Ophthalmology

VM 615.04P 1 Dentistry

VM 656P 2 Diagnostics**

VM 638P 2 Equine Surgery, Special

VM 652P 2 Equine Radiography

VM 616P 1 Exotics

VM 698.02P 4 Epidemiology of Diseases

VM 616P 1 Exotics

VM 698.03P 2 Fish Health and Aquaculture

VM 693P 4 Laboratory Animal Medicine, UW

VM 617P 2 Neurology**

VM 620P 2 Oncology

VM 651P 1 Pharmacy and Therapeutics

VM 631P 2 Problem Solving in Animal Pops.

VM 676P 4 Research

VM 614P 2 SA Com.Practice – Advanced**

VM 613P 2 SA Referral Medicine – Advanced**

VM 612P 2 SA Soft Tissue Surgery – Advanced**

VM 611P 2 SA Orthopedic Surgery – Advanced**

VM 690P 1-2 SIPE**

VM 632.03P 2 Beef Cattle Mgt.

VM 632.04P 2 Theriogenology – Bovine

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VM 653P 2 Diagnostic Imaging Services

VM 632.01P 2 Theriogenology – Equine

VM 636P 2 Equine Medicine, Advanced**

VM 632.02P 2 Theriogenology – General Lg. An.

VM 637P 2 Equine Surgery, Advanced**

**Supplemental courses are offered as core rotations, but with different course numbers

B. Describe the planned implementation of the proposed program, including estimates of numbers of students at each stage.

In the Fall of 2013, all applications will be submitted through the VMCAS (Veterinary Medical College Application Service) and include the WSU supplemental application. Students identify their state of residency, and all Montana residents go into the Montana applicant pool (all students must go through a certification process to confirm they are Montana residents for tuition purposes). These applicants are reviewed by a committee of four that includes the WSU CVM Director of Admissions, two representatives from MSU, and one from the Montana Veterinary Medical Association (MVMA; process derived from Utah State University 2+2 with WSU CVM). The top ten students would be selected and would matriculate in the Fall of 2014 (FY2015)

Y E A R	C P V M E @ M S U	C P V M E @ W S U
F Y 2 0 1 5	1 0	0
F Y 2 0 1 6	1 0	1 0
F Y 2 0 1 7	1 0	2 0
F Y 2 0 1 8	1 0	3 0

6. Resources

- **Will additional faculty resources be required to implement this program? If yes, please describe the need and indicate the plan for meeting this need.**

Yes. Teaching the 1st year WSU DVM Curriculum at MSU will require identifying appropriate existing and new faculty.

Forty instructional credit hours (1st semester, 21 credits [13 lecture, 24 lab]; 2nd semester, 19 credits [12 lecture, 21 lab]) at MSU would be required to meet the curricular needs of the program, which is factored into the budget projections below. The numbers of credits are not simply classroom instruction, but carry a significant amount of effort to teach the laboratory coursework. The credentials of projected MSU instructional staff and faculty course directors include those with Ph.D. or DVM degrees. This mix should provide breadth and depth of faculty expertise necessary to provide a quality teaching and learning environment. We anticipate that (if) current faculty members that participate in the CPVME will either have their current appointments changed to reflect their effort in the program or will teach in the program in addition to their current appointment expectations with compensation.

To meet the curricular needs for delivering the first year curriculum, we anticipate having to hire two new TT faculty members and a mix of existing TT and NTT faculty as follows:

- TT #1 12 credits: Assistant Professor, \$75,000 AY/ \$97,500 salary and benefits
- TT #2 6 credits and Program Director: Associate Professor \$90,000 AY/\$117,000 salary and benefits

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- Existing TT and NTT faculty 22 credits: \$46,750 (~\$4,000/credit) and \$75,000 AY/\$97,500 salary and benefits

1. ANTICIPATED TOTAL FACULTY COSTS: \$358,750

Personnel: \$358,750 (Salary to cover TT and NTT faculty teaching): These dollars will be used to compensate faculty dedicated to contributing to the first year curriculum as well as advising and mentoring.

- A. Are other, additional resources required to ensure the success of the proposed program? If yes, please describe the need and indicate the plan for meeting this need.

2. ANTICIPATED OTHER PERSONNEL COSTS: \$50,000

To meet the support staff needs, the following costs are anticipated:

- Program Director with responsibility for interfacing with WSU, recruitment and admissions, scheduling, outreach and integration with the mission of MSU. (Costs included in TT #2 above)
- Animal facility staff (0.5): \$25,000 salary and benefits
- Administrative staff (0.5): \$25,000 salary and benefits

The Director will be responsible for administering the functions of the CPVME on the MSU campus and play an active role in the development and implementation of the WSU CPVME curriculum, recruitment, admissions, orientation, etc. This will require considerable effort in developing partnerships between faculty and programs at MSU and WSU as well as across the State.

The Director will interact with appropriate administrators at MSU and with the WSU CVM Dean to develop integrated and comprehensive strategies for the continued growth and improvement of the veterinary science programs provided by the University as well as the expansion of life science research and educational programs throughout the MUS.

The Director will have regular contact with faculty, students, researchers, and administrators of MSU as well as veterinarians, MVMA, executives in the veterinary healthcare industry, and with government officials. The purpose of these contacts is to negotiate agreements, grants, and contracts; form partnerships and consortia; establish policies and priorities, and generate funding and external support for CPVME.

Additional responsibilities include:

- A. Meeting regularly with the faculty to ensure ongoing continuous curriculum improvement.
- B. Providing for effective administration of CPVME related student, faculty and alumni affairs, including establishing an alumni and friends development program.
- C. Promoting development of externally funded veterinary and animal health-related research, teaching, and service projects.
- D. Establishing and maintaining effective partnerships with various laboratories, programs, centers, departments, and colleges as well as other universities, businesses, and state and federal government agencies engaged in veterinary and animal health-related research, education, and outreach.
- E. Serving as a local representative/administrator for the CPVME in admissions, orientation, legislation,

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and related educational and placement programs.

- F. Maintain the accreditation standards for the veterinary medical student education program at MSU and WSU.
 - G. Contribute to ongoing efforts to integrate the life sciences and veterinary and animal health-related programs, and research and outreach activities at MSU.
 - H. Promote the development of sponsored veterinary health-related research, teaching and service projects.
3. ANTICIPATED ANNUAL OPERATING/SUPPLIES COSTS: \$100,000
4. ANTICIPATED ONE-TIME START-UP COSTS: \$250,000-\$500,000

Estimated one-time startup costs for classroom and lab renovations, and equipment purchases. Though most infrastructure needs for a 1st year DVM program at MSU are in place, there are improvements related primarily to improvement in the anatomy-teaching lab and are listed below.

- A. The ventilation in the anatomy room needs to be evaluated to clarify the flow rate and pattern and to determine whether it meets appropriate standards (OSHA).
- B. The room needs improved task lighting (either ceiling or standing).
- C. More comfortable seating will be needed, given the amount of time DVM students spend in the lab.
- D. Individual computer monitors would benefit the teaching effort in the anatomy labs.
- E. Access to the lab after hours needs to be addressed from a safety concern, as vet students spend time late at night in labs and they must be secure.
- F. A prep area for the lab would be beneficial, as well as identifying an area for dry specimens (freeze dried, skeletons, etc.)
- G. Modifications to the existing facility to house large animals at the anatomy lab will need to be considered, which may require additional space, if implemented.
- H. Equipment in support of the animal facilities (expanded surgery and animal handling).

These costs will be covered by MSU as part of its investment in the veterinary medicine program.

5. ANTICIPATED MSU OVERHEAD FIXED COSTS: ~\$10,000

PLAN: Income to pay for the program

- A. A class size of 10 students would ensure enrollment of fully qualified students. Potential exists to expand cohort up to 15 over time. Tuition provided by students (currently \$21,875 per year x 10 students=\$218,750).
- B. The support fee paid to WICHE for veterinary students is currently \$30,000/student with 9 students enrolled. The support fee needed for 10 students at MSU in the CPVME during FY2015 is \$319,260 (based upon current figures). **A key issue is that this State support continues through the 3 subsequent years at WSU, which is currently done for WICHE students. The FY2014 Support Fee is \$31,300 per student with a scheduled 2% increase each year. This would amount to a \$319,260**

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annual commitment to MSU for the first year (FY2015) with 10 students and result in Montana Support Fees to WSU of \$325,650 for 10 students (FY2016), \$664,320 for 20 students (FY2017) and \$1,016,400 for 30 students (FY2018).

Given the complexities associated with the CPVME across MSU and WSU, the topics of service payback, student debt reduction and loan forgiveness have not been discussed. This would likely be a Montana-based discussion.

7. Assessment

How will the success of the program be measured?

Graduation numbers will be tracked along with the number of highly qualified applicants seeking admission each year. In addition the development of internships and preceptorships in our rural animal veterinary practices will be tracked along with the number of veterinarians serving our rural communities. Informal and formal interviews with students at the end of each year of the program will be used to improve and expand the program.

8. Process Leading to Submission

Describe the process of developing and approving the proposed program. Indicate, where appropriate, involvement by faculty, students, community members, potential employers, accrediting agencies, etc.

In November of 2011 the idea of starting a shared cooperative veterinary program was discussed by Dr. Mark Jutila, Dr. Rebecca Mattix and Dr. Mark Quinn. The national trends to establish cooperative veterinary programs had become more prevalent leading to concerns about the educational future of Montana resident's access to veterinary programs. In addition the rural veterinary shortage in Montana has been a concern among the members of the MVMA.

Preliminary discussions between Dr. Bryan Slinker, Dean of the Washington State University College of Veterinary Medicine (WSU CVM) and Dr. Mark Jutila, Chair Montana State University Department of Microbiology and faculty member Immunology and Infectious Diseases in the College of Agriculture (MSU CA), led to consideration of a joint DVM program between the WSU CVM and MSU. Subsequently Dean Slinker met with MSU and MSU administrators and faculty members on November 30, 2011 to determine initial support to consider a joint program. Specifically, Dr. Slinker met with Mark Jutila, Rebecca Mattix, and Mark Quinn (Immunology and Infectious Diseases), Jeff Jacobsen (Dean of the College of Agriculture), Frances Lefcort (faculty member in Cell Biology and Neuroscience, and WWAMI instructor), Chris O'Rourke (Director of Animal Resource Center), Martin Teintze (Interim WWAMI Director), Provost Martha Potvin and President Waded Cruzado. This meeting resulted in agreement that a joint WSU CVM and MSU study should be conducted to determine program feasibility. General guidelines of the proposal included consideration of the development of a program at MSU that would provide either the 1st or 1st and 2nd years of education in a DVM program for 10 Montana resident students who would subsequently transfer to the WSU campus and complete either the 2nd, 3rd and 4th years, or the 3rd and 4th years, respectively, of the WSU DVM program.

This proposal was subsequently presented to the CVM cabinet for consideration and was determined worthy of further exploration by a feasibility committee. On January 10, 2012 the Feasibility Committee was charged to evaluate the feasibility of a joint program between the WSU CVM and the MSU CA. Administrators and faculty from the MSU CA and the MSU College of Letters and Science, and the WSU CVM formed the committee, which met numerous times from January through March in 2012.

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At the Montana Veterinary Medical Association meeting in January, the proposal of a CPVME program with MSU and WSU was presented to the general membership meeting. It was positively received by members. The MVMA has contacted MSU for an update on the status of the program development and would like to know how the industry can help advance this program to fruition. Dr. Jeff Jacobsen presented the current status at the summer membership meeting on June 26, 2012. In addition, this program in general has been discussed with the Montana Farm Bureau Federation and the Montana Stockgrowers Association.

MSU, its College of Agriculture, College of Letters and Sciences, WWAMI program, and the local and State resources offer substantial future educational opportunities to all students in the CPVME.

Veterinary Health and Human Health

- Because of the small WWAMI and a potential DVM class size, unique cross medicine training opportunities can more readily be offered. This added exposure and integration can foster the development of a “One Medicine” training theme.

Unique expertise in biocontainment facilities

- MSU CA has a state-of-the-art BSL-3 research facility and an ABSL-2 livestock research facility, which can be used to provide students unique training opportunities in biosafety, biocontainment and biosecurity.

Large and food animal opportunities

- Extensive equine program, including a highly regarded shoeing school.
- Existing teaching and research in animal production and management.
- Infectious disease research programs in livestock.
- Collaboration with the MVMA.

Small animal and specialty practice opportunities

- Externships in small and exotic animal medicine – Practices ranging from single practitioners to multiple owner/associate practices. Currently there are specialty veterinary practices in Equine Medicine, Equine Surgery, Small Animal Surgery, Small Animal Radiology, Small Animal Internal Medicine. With the addition of this program, there is hope for opportunities to expand into bovine specialty practice as well.

Collaboration with the Montana Veterinary Medical Association

- MVMA is in full support of developing the CPVME with WSU CVM. The development and ability to mentor veterinary students along with providing opportunities for clinical experience directly serves the needs of our veterinary industry. In addition, the veterinary industry would like to have input in the selection of the students entering this profession. It is the hope that by having input into selection it will result in a higher return rate to Montana’s rural communities currently underserved by veterinarians.