

University Council Recommendations
The University of Georgia

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OFFICE OF THE PRESIDENT
2005 SEP 29 A 9: 11

To: President Michael F. Adams
Re: DOCUMENT NUMBER: 2005.9.22.01
Issue: A proposal for a Major in Veterinary and Biomedical Sciences (M.S.).
Discussion: None
Action: The vote was called and the proposal was approved.

Submitted by: Rebecca L. Macon
Rebecca L. Macon, Secretary

9.28.05
Date

- Approved
- Reconsider
- Vetoed (see attached explanation)
- Received

M. F. Adams
Michael F. Adams, President

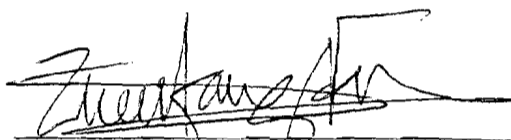
10/6/05
Date

Attachment

University of Georgia
New Program Proposal

Date: March 2005
Institution: University of Georgia
School/Division: College of Veterinary Medicine
Departments:
Name of Proposed Program: Masters of Science
Degree: M.S.
Major: Veterinary and Biomedical Sciences
CIP code:
Starting Date: August 2006

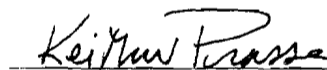
Signatures:



Zhen Fu, DVM, PhD
Chair, College of Veterinary Medicine Graduate Committee



Harry W. Dickerson, B.V.Sc., Ph.D.
Associate Dean for Research and Graduate Affairs



Keith W. Prasse, DVM, PhD
Dean

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1. Program Description and Objectives

The college-wide MS degree program in Veterinary and Biomedical Sciences will have a core mission to train the next generation of veterinary and biomedical scientists. To prepare students to make contributions to modern veterinary science and medicine, the program will emphasize interdisciplinary training and education in veterinary science and medicine, recognizing the importance of physiology, pathology, infectious diseases, and population medicine. Graduates of this program will understand the basic scientific principles related to veterinary medicine. The objective is to attract and train a cadre of highly qualified graduate students in the veterinary and biomedical sciences. This objective intersects the UGA Strategic Plan's "Strategic Visions for UGA in 2010" in two ways: the recommended investment in research in the veterinary and biomedical sciences and the recommended growth of the quality and number of graduate students.

MS degree programs in the College of Veterinary Medicine are currently administered through individual academic departments within the college. Thus, the numbers of MS candidates are divided among the various departments. A centralized program will offer one place for candidates to obtain all required information including, but not limited to, graduate admission, course and thesis requirements, and forms to be filled and signed. This will result in reduction of administration resources. If the new program is approved, request will be made for termination of the MS programs in Anatomy and Radiology, Infectious Diseases, Pathology, Physiology and Pharmacology.

2. Justification and Need for the Program

A. Societal Need

MS programs in the College of Veterinary Medicine serve two purposes, namely: to train skilled laboratory technologists who eventually find jobs in biomedical industries, and to prepare students for higher degree education (i.e. PhD, MD, and DVM). Therefore, the MS degree program in Veterinary and Biomedical Sciences fulfills a societal need to provide the training sought by students in the veterinary and biomedical sciences. The pharmaceutical industry and biotechnology companies also continue to employ candidates with MS training in veterinary and biomedical sciences.

B. Student Demand

Some college students go directly to higher degree education (PhD, MD, and DVM) while others would like to begin with an MS degree. Annually, there are approximately 30 students who apply for enrollment of MS degree in the College of Veterinary Medicine. Thus, there is a consistent demand for MS degree training in veterinary and biomedical sciences.

C. Additional Factors

The proposed program complements other degree programs within the college such as PhD, DVM, DVM/MPH, and DVM/PhD. This will increase interaction among the faculty as well as graduate students.

D. Consultant reports

N/A

E. Public and Private Institutions in the State of Georgia with Similar Programs:

Medical College of Georgia: The School of Allied Health Sciences at MCG has a college wide advanced Master of Science program that trains student in biomedical research.

F. Public and Private Institutions in the Southeast Region with Similar Programs:

Auburn University: The College of Veterinary Medicine at Auburn University has a college-wide MS program in Biomedical Sciences which is administered by a committee of the Graduate Faculty and the Associate Dean for Research and Graduate Studies acting in conjunction with the departments.

The University of Tennessee, Memphis: The College of the Graduate Health Sciences in the University of Tennessee has an interdisciplinary MS program in Biomedical Sciences which include areas of Anatomy and Neurobiology, Molecular Sciences, Pathology, Pharmacology, and Physiology.

Mississippi State University: The College of Veterinary Medicine at Mississippi State University has an interdisciplinary MS program in veterinary medical sciences

3. The Process Used to Develop the MS Program in Veterinary and Biomedical Sciences

The College of Veterinary Medicine Graduate Affairs Committee convened an *ad hoc* committee to consider the feasibility of consolidating the College's various graduate training programs into a single college-wide veterinary biomedical degree program. The suggestions and guidelines that were developed through this process were presented to the dean and Administrative Council, which represents the administrative leadership of the College's academic units. The Administrative Council approved the recommendations and the dean charged the Graduate Affairs Committee to develop a specific plan for implementation of a college-wide M.S. degree program. The resultant plan to implement a college-wide MS Program in Veterinary and Biomedical Sciences was approved by a majority vote of College graduate faculty. Fifty-two College graduate faculty members voted out of a total of 72 who were eligible to participate. The votes were as follows: 43 ayes, 5 nays, and 4 abstentions.

4. Curriculum**A. The MS Program in Veterinary and Biomedical Sciences**

The ultimate goal of the MS program in veterinary and biomedical sciences is the education and training of veterinary and biomedical scientists with a focus on the understanding

of veterinary and biomedical sciences and the skills to perform basic and applied research in related fields. Within this goal, our mission is to provide students with a wide array of research opportunities in several more focused curricula including anatomy, infectious diseases, pharmacology, physiology, veterinary behavior, veterinary parasitology, veterinary pathology, and population medicine. A student will declare the discipline (area of emphasis) upon registration. The student must complete a program of study comprised of a minimum of 30 semester hours consisting of at least 12 semester hours of course work, which are open only to graduate students (exclusive of 7000 and 7300), and are in the area of emphasis as determined by the student's thesis advisor and committee, and approved by the graduate coordinator of the department in which the area of emphasis resides (e.g., Infectious Diseases, Physiology and Pharmacology, etc). A maximum of 6 hours of 7000 may be applied toward the minimum of 30 hours. A minimum of 3 hours of 7300 must be listed on the program of study. Students will follow the curriculum specified in the area of emphasis.

B. Requirements for the MS Program in Veterinary and Biomedical Sciences

There are no core courses for the MS students. Depending on the discipline, the courses are listed as the following:

Infectious Diseases

IDIS 4100/6100-4100L/6100L	Medical Immunology	3 hrs.
IDIS 4220/6220	Pathogenic Bacteriology	3 hrs.
IDIS 4390/6390/-4390L/6390L	Clinical Diagnostic Microbiology	4 hrs.
IDIS(MIBO) 4450/6450-4450L/6450L	Microbial Genetics and Genomics	4 hrs.
IDIS 4500/6500-4500L/6500L	Virology	3 hrs.
IDIS 7000	Master's Research	1-15 hrs.
IDIS 7300	Master's Thesis	1-15 hrs.
VPAT(IDIS) 8150	Virology and Viral Pathogenesis	3 hrs.
IDIS 8160	Seminar in Medical Microbiology	1 hr.
IDIS(MIBO) 8200	Pathogenic and Molecular Microbiology	5 hrs.
IDIS 8210	Experimental Procedures in Microbial Pathogenesis	4 hrs.
IDIS(MIBO) 8230	Special Topics in Microbial Pathogenesis	2 hrs.
IDIS 8300	Advanced Immunology II	3 hrs.
IDIS 8350	Principles and Research Applications of Flow Cytometry	3 hrs.
IDIS 8500	Animal Virology	3 hrs.
IDIS 8550	Special Topics in Immunology	1 hr.
IDIS 8900	Problems in Medical Microbiology	1-10 hrs.

Pathology

BIOL(CBIO)(VPAT)5040/7040	Electron Microscopy	3 hrs.
VPAT 7000	Master's Research	1-10 hrs.

VPAT 7005	Graduate Student Seminar	3 hrs.
VPAT 7010	Necropsy Practicum	1-12 hrs.
VPAT 7011	Necropsy Practicum II	1 – 18 hrs
VPAT 7012	Necropsy Practicum III	1-18 hrs.
VPAT 7020	Biopsy Practicum	1-12 hrs.
VPAT 7021	Biopsy Practicum II	1- 18 hrs.
VPAT 7022	Biopsy Practicum III	1 – 18 hrs.
VPAT 7030	Cytology Practicum	1-12 hrs.
VPAT 7031	Cytology Practicum II	1 – 18 hrs.
VPAT 7032	Cytology Practicum III	1 – 18 hrs.
VPAT 7200-7200L	General Animal Pathology	3.7 hrs.
VPAT 7300	Master's Thesis	1-10 hrs.
VPAT 8000	Pathology Rounds	1 hr.
VPAT 8020	Cellular Pathology	4 hrs.
VPAT 8050	Problems in Veterinary Pathology	2-5 hrs.
VPAT 8070-8070L	Veterinary Hematology	3 hrs.
VPAT 8100	Microscopic Pathology	3 hrs.
VPAT 8110	Veterinary Advanced Pathology	3 hrs.
VPAT 8120	Seminars in Laboratory Clinical Biochemistry	1-3 hrs.
VPAT 8130	Diagnostic Oncology	3 hrs.
VPAT 8140	Seminar in Veterinary Pathology	1-2 hrs.
VPAT(IDIS) 8150	Virology and Viral Pathogenesis	3 hrs.
VPAT(AVMD) 8220	Avian Histopathology	3 hrs.
VPAT 8320	Pathology of Laboratory Animals	3 hrs.

Physiology and Pharmacology

VPHY 5200/7200	Principles of Pharmacology	3.1 hrs
VPHY 6050	Animal Physiological Chemistry	2 hrs
VPHY 6090	Comparative Mammalian Physiology	3 hrs
VPHY 6100	Comparative Mammalian Physiology	3 hrs
(VPHY)PHRM 6910	Introductory Toxicology	3 hrs
VPHY 6930	Research Methods	1-3 hrs.
VPHY 7000	Master's Research/Physiology	1-10 hrs.
VPHY 7010	Master's Research/Pharmacology	1-10 hrs.
VPHY 7020	Master's Research/Pharmacology and Toxicology Emphasis	1-10 hrs.
VPHY 7300	Master's Thesis	1-10 hrs.
VPHY 8000	Cardiovascular Physiology	2 hrs.
VPHY 8010	Mammalian Cell Physiology	3 hrs.
VPHY 8080	Ruminant Physiology	3 hrs.
VPHY 8100	Comparative Medical Endocrinology	2 hrs.
VPHY 8120	The Molecular Basis of Renal Physiology	2 hrs.
VPHY 8200	Animal Molecular Biology: Concepts and Current Literature	2 hrs.
VPHY 8400	Neurophysiology	3 hrs.

VPHY 8450	Advanced Clinical Pharmacology	2 hrs.
VPHY 8460	Molecular Pharmacology	3 hrs.
VPHY 8900	Physiology-Pharmacology Seminar	1 hr.
(VPHY)PHRM 8910	Organ Systems Toxicology I	3 hrs.
(VPHY)PHRM(POUL) 8920	Organ Systems Toxicology II	3 hrs.
(VPHY)(EHSC)PHRM(POUL) 8930	Chemical Toxicology	3 hrs.

Veterinary Anatomy and Radiology

VARB 6070	Neuroanatomy of Domestic Animals	1.3 hrs
VARB 7000	Master's Research	3-9 hrs.
VARB 7110	Practicum in Teaching Gross Anatomy	4 hrs.
VARB 7120	Laboratory in Anatomy of the Horse	3.7 hrs.
VARB 7130	Laboratory in Anatomy of Food Animals	3.7 hrs.
VARB 7140	Veterinary Animal Behavior	1.3 hrs.
VARB 7150	Principles of Veterinary Anatomy	4 hrs.
VARB 7160	Laboratory in Anatomy of the Dog and Cat	3.7 hrs.
VARB 7300	Master's Thesis	1-10 hrs.
VARB 7340	Clinical Problems of Animal Behavior	1-5 hrs.
VARB 8010	Problems in Veterinary Anatomy	1-5 hrs.
VARB 8030	Advanced Veterinary Histology	3 hrs
VARB 8050	Special Radiographic Procedures	3 hrs.
VARB 8100	Fine Structure of Animal Tissues	4 hrs.
VARB 8340	Seminar in Applied and Domestic Animal Behavior	1-5 hrs.

C. Sample Programs of Study

Infectious Diseases**Year 1**

IDIS 4100/6100-4100L/6100L	Medical Immunology	3 hrs
IDIS 4220/6220	Pathogenic Bacteriology	3 hrs
IDIS 6390/6390L	Clinical Diagnostic Microbiology	4 hrs
IDIS(MIBO) 8200	Pathogenic and Molecular Microbiology	5 hrs
IDIS 7000	Master's Research	3 hrs

Year 2

IDIS 4450/6450-4450L/6450L	Microbial Genetics and Genomics	4 hrs
IDIS 8160	Seminar in Medical Microbiology	1 hr
IDIS 7000	Master's Research	3 hrs
IDIS 7300	Master's Thesis	6 hrs

Pathology**Year 1**

IDIS 4100/6100-4100L/6100L	Medical Immunology	3 hrs
STAT 6210	Statistical Methods I	3 hrs
BIOL(CBIO)(VPAT) 5040/7040	Electron Microscopy	3 hrs
VPAT 7200-7200L	General Animal Pathology	3.7 hrs
VPAT 7000	Master's Research	3 hrs

Year 2

VPAT 8020	Cellular Pathology	4 hrs
VPAT 7005	Graduate Student Seminar	3 hr
VPAT 7000	Master's Research	3 hrs
VPAT 7300	Master's Thesis	7 hrs

Physiology and Pharmacology**Year 1**

VPHY 6050	Animal Physiological Chemistry	2 hrs
STAT 6210	Statistical Methods I	3 hrs
VPHY 6090	Comparative Mammalian Physiology	3 hrs
VPHY 6930	Research Methods	3 hrs
VPHY 7000	Master's Research/Physiology	3 hrs

Year 2

VPHY 8010	Mammalian Cell Physiology	3 hrs
VPHY 8400	Neurophysiology	3 hrs
VPHY 8900	Physiology-Pharmacology Seminar	1 hr
VPHY 7000	Master's Research/Physiology	3 hrs
VPHY 7300	Master's Thesis	7 hrs

Veterinary Anatomy and Radiology

Year 1

STAT 6210	Statistical Methods I	3 hrs
VARB 6070	Neuroanatomy of Domestic Animals	1.3 hrs
VARB 7000	Master's Research	3 hrs

Year 2

VARB 7150	Principles of Veterinary Anatomy	4 hrs
VARB 7140	Veterinary Animal Behavior	1.3 hrs
VARB 8340	Seminar in Applied and Domestic Animal Behavior	1 hr
VARB 7000	Master's Research	3 hrs
VARB 7300	Master's Thesis	6 hrs

D. Course Descriptions

All the courses are existing courses

5. Inventory of Faculty Directly Involved

ANATOMY AND RADIOLOGY	Sharon L. Crowell-Davis, D.V.M., Ph.D. - Human-animal bond, animal behavior. Thomas M. Krunkosky, D.V.M., M.S., Ph.D. - Molecular mechanisms of inflammation and disease in the lung.
AVIAN MEDICINE	Maricarmen Garcia, Ph.D. - Avian virology, molecular virology. John R. Glisson, D.V.M., M.A.M., Ph.D. - Clinical avian medicine, mycoplasmosis and bacteriology. Charles L. Hofacre, D.V.M., M.A.M., Ph.D. - Clinical avian medicine, mycoplasmosis and bacteriology. Mark Jackwood, Ph.D. - Molecular biotechnology, molecular virology. Daniel J. King, D.V.M., Ph.D. - Avian virology. Stanley H. Kleven, D.V.M., Ph.D. - Mycoplasmosis. Margie D. Lee, D.V.M., Ph.D. - Bacteriology. John J. Maurer, Ph.D. - Molecular bacteriology. Holly Sellers, M.S., Ph.D. - Avian virology Stephen G. Thayer, Ph.D. - Diagnostic veterinary microbiology, viral serology. Pedro Villegas, D.V.M., Ph.D. - Avian virology.
LARGE ANIMAL MEDICINE	Michelle H. Barton, D.V.M., Ph.D. - Endotoxemia, Neonatology, Internal Medicine. Dana J. Cole, B.S., D.V.M., Ph.D. - Environmental transport of zoonotic pathogens, Epidemiology of Antimicrobial Resistance and Food Safety, Quantitative Risk Assessment, Infectious Disease Modeling. Richard A. Fayrer-Hosken, B.V.Sc., Ph.D. Theriogenology, reproductive physiology, immunocontraception, exotic reproductive physiology. David J. Hurley, Ph.D. - Veterinary Immunology and Vaccine Development. James N. Moore, D.V.M., Ph.D. - Endotoxemia & Laminitis. John Peroni, Microvascular dysfunction in equine laminitis, Regulation of equine pulmonary blood flow, and Small vessel myography Michel Vandenplas, B.Sc., M.Sc., Ph.D. - Modulation of Endotoxin Signal Transduction in Human and Equine Monocytes, Generation of Equine Expressed Sequence Tags. Amelia R. Woolums, M.V.Sc., D.V.M., Ph.D. - Bovine Respiratory Disease and Respiratory Immunity.
INFECTIOUS DISEASES	Joe Corn, Ph.D. - Tick Ecology and wildlife diseases. William R. Davidson, Ph.D. - Infectious diseases of wildlife. Harry W. Dickerson, B.V.Sc., Ph.D. - Comparative immunoparasitology. Donald L. Evans, Ph.D. - Cellular immunology and immunoregulation. Liliana Jaso-Friedmann, Ph.D. - Molecular immunology. Mary Hondalus, D.V.M., Ph.D. - Tuberculosis, vaccines and Rhodococcus pathogenesis. Ray M. Kaplan, D.V.M., Ph.D. - Parasitic diseases of livestock. Susan E. Little, D.V.M., Ph.D. - Parasitology, molecular epidemiology. John W. McCall - Ph.D. - Chemotherapy and diagnosis of filariasis, parasitology. Daniel G. Mead, Ph.D. - Vector-borne viral diseases. Julie M. Moore, Ph.D. - Malarial immunology. Massimo Palmarini, D.V.M., Ph.D. - Retroviral biology and oncogenesis. David S. Peterson, Ph.D. - Molecular parasitology. Frederick D. Quinn, Ph.D. - Tuberculosis/mycobacterial pathogenesis. Susan Sanchez, Ph.D. - Molecular mechanisms and epidemiology of antibiotic resistance. David E. Stallknecht, Ph.D. - Wildlife diseases, epidemiology. David Suarez, Ph.D. - Influenza pathogenesis.

	<p>Ralph A. Tripp, Ph.D. - Viral immunology and vaccine development. Richard E. Wooley, D.V.M., Ph.D. - Antibiotic potentiation, microbial pathogenesis.</p>
PATHOLOGY	<p>Cathy A. Brown, V.M.D., Ph.D. - Progression of chronic renal disease, infectious diseases, and diagnostic pathology. Corrie C. Brown, D.V.M., Ph.D. - Infectious diseases of food-producing animals, foreign animal diseases. K. Paige Carmichael, D.V.M., Ph.D. - Spontaneous animal models of human neurologic disease; neuropathology, ocular diseases. Paula J. Fedorka-Cray, B.S., M.S., Ph.D. - Food and Production Animal Microbiology. John R. Fischer, D.V.M., Ph.D. - Pathology, virulence mechanisms, and population effects of diseases in wildlife. Zhen Fu, D.V.M., Ph.D. - Molecular pathogenesis of rabies. Jaroslava T. Halper, M.D., Ph.D. - Growth factors and neoplasia, wound healing. Bary G. Harmon, D.V.M., Ph.D. - Bacterial pathogenesis, leukocyte biology. Elizabeth W. Howerth, D.V.M., Ph.D. - Wildlife diseases, pathogenesis of viral diseases. Kenneth S. Latimer, D.V.M., Ph.D. - Viral diseases of companion and exotic birds, pathology of fishes, Pelger-Huet anomaly of dogs. Bruce LeRoy, D.V.M., Ph.D. - Clinical Pathology, Prostate Cancer, Bone Metastases Jaganatha V. Mysore, M.V.Sc., Ph.D. - Pathobiology of gastroenteritides, mechanisms of bacterial adhesion and intestinal epithelial cell culture. Keith W. Prasse, D.V.M., Ph.D. - Hemostasis, Tele (veterinary) medicine. Sherif Ramzy Zaki, M.S., Ph.D. - Infectious Diseases, Zoonoses, Pathology. David Swayne, D.V.M., M.S., Ph.D. - Renal diseases associated with infectious and non-infectious etiologies. Elizabeth Uhl, D.V.M., Ph.D. - Molecular pathology; role of transcription factors in susceptibility and resistance to disease.</p>
PHYSIOLOGY & PHARMACOLOGY	<p>Scott A. Brown, V.M.D., Ph.D. - Biology of renal microvasculature. Julie A. Coffield, D.V.M., Ph.D. - Toxicology, neurology. Gaylen L. Edwards, D.V.M., Ph.D. - Neural control of ingestive behavior, motivation and reward. Duncan C. Ferguson, V.M.D., Ph.D. - Thyroid hormone metabolism and action, clinical pharmacology. Margarethe Hoenig, D.M.V., Ph.D. - Endocrinology and clinical pharmacology. Stephen J. Lewis, Ph.D. - Mechanisms regulating vascular tone. Royal A. McGraw, Ph.D. - Mammalian molecular genetics, DNA technology. Thomas F. Murray, Ph.D. - Molecular mechanisms of neuroactive drugs and toxins. Raghubir P. Sharma, B.V.Sc., Ph.D. - Molecular mechanisms in toxicology. John J. Wagner, Ph.D. - Mechanisms of neuroplasticity and drugs of abuse.</p>
SMALL ANIMAL MEDICINE & SURGERY	<p>Dennis N. Aron, D.V.M. - Orthopedic surgery, neurosurgery, plastic and reconstructive. Jeanne A. Barsanti, D.V.M., M.S. - Renal pathophysiology, urology. Steven C. Budsberg, D.V.M., M.S. - Gait analysis and osteoarthritis. Karen Cornell, D.V.M., Ph.D. - Cancer research, mechanisms of metastasis. Craig E. Greene, D.V.M., M.S. - Infectious diseases, bleeding disorders. MaryAnn Radlinsky, D.V.M., M.S. Minimally invasive surgery, upper respiratory diseases. Branson W. Ritchie, D.V.M., Ph.D. - Viral diseases of companion birds, zoo animal medicine.</p>

6. Three Outstanding Programs of This Nature in Other Institutions

See F, above.

7. Inventory of Pertinent Library Resources

The University of Georgia has the largest library in the state, with more than 3.8 million volumes. The UGA Libraries are members of the Association of Research Libraries and ranked 35th in total volumes held and 9th in current periodicals owned in 2000. Moreover, UGA is a Regional Depository library to the U.S. Superintendent of Documents and U.S. Government Printing Office.

A. Print Materials

The University of Georgia Libraries own an impressive print collection in the sciences and ranks very high for a research university that does not have an affiliated medical school. The Science Library contains approximately 750,000 total volumes, owns 1044 periodical titles in medicine and 1326 periodical titles in basic life sciences. There are additional titles located in the Main Library that are relevant to some research areas.

B. Electronic Materials

Like the print materials, the University of Georgia Libraries offer very impressive access to electronic resources, including full text journal articles. Among these resources are the *Web of Science* from the Institute of Scientific Information, *Science Citation Index* with backfiles to 1945 and *Journal Citation Reports*. Hundreds of additional databases are available via the statewide GALILEO system. Among these are CABI, Agricola, BIOSIS, Biological and Agricultural Index, MEDLINE, Cambridge Scientific Abstracts, PsychInfo, Sport DISCUS and Chemical Abstracts SciFinder Scholar. Important to the IBS Program is the electronic access to full-text journal articles via Elsevier's ScienceDirect (over 900 titles), Springer-Verlag, Academic Press, Lippincott/Williams and Wilkins, Cell Press and several individual bioscience related titles such as Annual Reviews. GALILEO also allows access to other full-text resources such as AHFS Drug Information, CRC Handbook of Chemistry and Physics, Stedman's Medical Dictionary and USP/DI Drug Information.

In summary, no new library support will be needed to implement the MS Program in Veterinary and Biomedical Sciences.

8. Facilities

The College of Veterinary Medicine will house the administrative offices for the MS Program in Veterinary and Biomedical Sciences. All faculty involved in the MS Program in Veterinary and Biomedical Sciences, throughout the College of Veterinary Medicine, have well equipped laboratories to sustain their current research load. It is expected that students will be trained in these existing facilities. These include laboratories for genomics, proteomics, molecular biology, physiology and pharmacology, toxicology, infectious diseases, microbiology, virology, parasitology, etc. Hence, there are ample existing research facilities for the program.

9. Administration

The MS Program in Veterinary and Biomedical Sciences will be administered through the College's Office of the Associate Dean, Research and Graduate Affairs. With input from the Associate Dean, College graduate faculty, graduate coordinators of other successful graduate programs on campus, and the Graduate School, detailed administrative guidelines will be developed including: admission standards (based mainly on undergraduate GPA, GRE scores, letters, and interview visits) and requirements beyond the program of study detailed elsewhere (e.g., research rotations, dissertation prospectus, seminars, written and oral comprehensive exams). The Office of the Associate Dean will coordinate the development of detailed policies concerning student financial support. In this effort, UGA has several strong graduate programs to use as models.

10. Assessment

A. Direct Student Assessment:

Web-based questionnaires (an exit questionnaire and a 5-years post graduation questionnaire) will be sent to those who graduate from this program to assess its effectiveness. Input will also be sought from graduates on what are the most helpful aspects of the program and where improvement could be made. Examples of specific questions to be asked include the following: identification of most useful courses, effectiveness of major professor, usefulness of the thesis committee, guidance in preparation of scientific manuscripts, and adequacy of resources. Responses will be compiled and reviewed by relevant graduate faculty and proper adjustments will be made to the program.

B. Learning Outcomes Assessment:

Parameters to be measured will include success in current position and adequacy of preparation for further Ph.D. training.

11. Accreditation

N/A

12. Affirmative Action Impact

None

13. Degree Inscription

Master of Science in Veterinary and Biomedical Sciences

14. Fiscal and Enrollment Impact and Estimated Budget

No expected change.