

College of Veterinary Medicine
Bulletin
2010-12

The University of Georgia

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The University of Georgia, a land-grant and sea-grant university with statewide commitments and responsibilities, is the state's oldest, most comprehensive, and most diversified institution of higher education. Its motto, "to teach, to serve, and to inquire into the nature of things," reflects The University's integral and unique role in the conservation and enhancement of the state's and nation's intellectual, cultural, and environmental heritage.

The University of Georgia shares with the other research universities of the University System of Georgia the following core characteristics:

- a statewide responsibility and commitment to excellence and academic achievements having national and international recognition;
- a commitment to excellence in a teaching/learning environment dedicated to serve a diverse and well-prepared student body, to promote high levels of student achievement, and to provide appropriate academic support services;
- a commitment to excellence in research, scholarship, and creative endeavors that are focused on organized programs to create, maintain, and apply new knowledge and theories; that promote instructional quality and effectiveness; and that enhance institutionally relevant faculty qualifications;
- a commitment to excellence in public service, economic development, and technical assistance activities designed to address the strategic needs of the state of Georgia along with a comprehensive offering of continuing education designed to meet the needs of Georgia's citizens in life-long learning and professional education;
- a wide range of academic and professional programming at the baccalaureate, master's, and doctoral levels.

With its statewide mission and core characteristics, The University of Georgia endeavors to prepare the University community and the state for full participation in the global society of the twenty-first century. Through its programs and practices, it seeks to foster the understanding of and respect for cultural differences necessary for an enlightened and educated citizenry.

It further provides for cultural, ethnic, gender, and racial diversity in the faculty, staff, and student body. The University is committed to preparing the University community to appreciate the critical importance of a quality environment to an interdependent global society.

As a comprehensive land-grant and sea-grant institution, The University of Georgia offers baccalaureate, master's, doctoral and professional degrees in the arts, humanities, social sciences, biological sciences, physical sciences, agricultural and environmental sciences, business, environmental design, family and consumer sciences, forest resources, journalism and mass communication, education, law, pharmacy, social work, and veterinary medicine.

The University attracts students nationally and internationally as well as from within Georgia. It offers the state's broadest array of possibilities in graduate and professional education, and thus a large minority of the student body is post-baccalaureate. The predominantly Georgian undergraduate student body is a mix of highly qualified students originally admitted as freshmen and selected transfer students principally from other University System institutions.

With original scholarship, basic and applied research, and creative activities constituting an essential core from which to draw, the impact of the land-grant and sea-grant mission is reflected throughout the state.

Cooperative extension, continuing education, public service, experiment stations, and technology transfer are all designed to enhance the well-being of the citizens of Georgia through their roles in economic, social, and community development.

As it has been historically, The University of Georgia is responsive to the evolution of the state's educational, social, and economic needs. It aspires through its strategic planning to even closer contact and interaction with public and private institutions throughout the state as well as with the citizens it serves.

History of the College

The present College of Veterinary Medicine was organized in 1946, although it was preceded at The University of Georgia by a degree program in veterinary medicine offered from 1918 to 1933.

The College was accredited by the American Veterinary Medical Association in 1950 and graduated its first class that same year.

The College of Veterinary Medicine has developed extensively since its inception. Currently there are approximately 140 faculty members dedicated to the teaching, research, and service missions of the College. This provides a favorable faculty-to-student ratio in the DVM program.

The graduate program and the quality of resources for graduate training have continued to grow. Today the College has a college-wide master's degree program, five PhD degree programs, and two dual degree programs (DVM/PhD and DVM/MPH).

Careers in Veterinary Medicine

Veterinary medicine is a unique combination of medical, agricultural, and biological sciences. It is the health profession that applies principles of biomedical sciences to health and disease in animals. Veterinary medical research also has important direct and indirect implications for human health.

Veterinarians are charged with the health of the nation's food producing animals and its companion animals, both of which are potential sources of diseases transmissible to humans.

Veterinary medicine offers many excellent opportunities for those who hold an interest in medicine, who enjoy working with animals, and who want to contribute to society in a meaningful way.

Program of Study

Students at the College of Veterinary Medicine follow a four-year program of study. The first 34 months of the curriculum are designed to integrate a sound knowledge of the basic medical sciences with clinical application.

The 14 months of the curriculum are devoted entirely to the application of basic medical sciences to veterinary medical principles and procedures in a clinical situation.

The senior year is divided into 20 blocks of 13-30 instructional days. Each student is required to take clinical instruction in the following areas: small animal medicine, small animal surgery, large animal medicine, and large animal surgery. Each student also is required to take clinical rotations in anesthesia, radiology, pathology, and field services. Elective coursework also is required. An externship may be used to satisfy the elective requirement. An additional six to nine weeks is available for free time or electives.

Facilities

The College maintains a state-of-the-art computer assisted learning center (Vet Lab) where students can study learning modules developed by faculty to augment the material presented in the classroom. Classrooms in the College are equipped with the latest in instructional technology to provide high quality visual and audio presentations. Additionally, live audiovisual images can be projected in classrooms from multiple areas in the Veterinary Medical Teaching Hospital.

Other special learning facilities include the Oconee County Farm, where interested students participate in the husbandry and veterinary care of beef cattle, and an Equine Facility, where students gain experience in equine theriogenology.

The University of Georgia Science Library is located near the College of Veterinary Medicine. Computerized literature searches and resources for arranging interlibrary loans are available through the College's Reading Room. It contains current periodicals and reference materials for study.

Veterinary Teaching Hospital

The Veterinary Teaching Hospital provides clinical experience for students by enabling them to manage veterinary cases under the supervision of board certified practicing clinicians.

The staff is composed of faculty members with advanced training in various areas of veterinary medicine, including internal medicine, surgery, radiology, dermatology, ophthalmology, neurology, anesthesiology, oncology, reproduction, and production animal medicine.

The staff's services and hospital facilities are also available to private practitioners on a referral or consultation basis and for continuing education programs.

Graduate and Postgraduate Programs

The College of Veterinary Medicine offers graduate programs leading to the Master of Science and Doctor of Philosophy degrees. These programs are designed to prepare graduates for positions in research and teaching, primarily in the medical sciences.

Major areas of concentration include anatomy, infectious diseases, public health, parasitology, pathology, pharmacology, physiology, and toxicology. The programs are open to veterinary graduates as well as candidates with bachelor's degrees in related areas.

For veterinary graduates who need specialized training in the diagnosis, treatment, and prevention of poultry diseases, a program is offered leading to a Master of Avian Medicine.

Internship and residency programs for veterinary graduates seeking advanced training are offered in small animal internal medicine, large animal internal medicine, small animal surgery, large animal surgery, neurology, oncology, ophthalmology, theriogenology, dermatology, anesthesiology, and radiology.

Veterinary medical graduate assistantships are available on a competitive basis to support qualified graduate students holding the DVM degree. Other graduate assistantships are available on a competitive basis to students who do not have a DVM.

Professional and graduate students are involved in research programs through various seminars, group discussions, and individually supervised research programs.

Faculty members in the College in the Interdisciplinary Toxicology Program, and the Interdisciplinary Neuroscience Program which are also staffed by faculty from a number of University departments.

Continuing Education

The College provides a program of continuing education for its graduates and other veterinarians within the state and region. The office is under the direction of a full-time faculty member, and some courses are jointly sponsored with the Georgia Center for Continuing Education.

Conferences, short courses, workshops, and instruction involving various medical and surgical disciplines are scheduled annually to update veterinarians with current knowledge, techniques, and serve as a focus for the exchange of information. The College maintains

educational excellence in different areas of specialization which affords the veterinary graduate an interactive environment for learning. Veterinary technicians, veterinary assistants and the public are invited to appropriate classes and laboratories.

Public Service and Outreach

The College fulfills its service and outreach mission through the accredited facilities of a veterinary teaching hospital, statewide diagnostic and investigational laboratories, and with continuing professional education.

Two diagnostic laboratories are operated by the College, one in Athens and another in Tifton. Accessions are received from veterinarians, Georgia's livestock industry and research projects. Charged with disease surveillance, expertise within the faculty and staff monitor animal and associated public health concerns as well as provide support to other departments.

The Veterinary Teaching Hospital serves as a resource for training programs in the small and large animal clinics for veterinary technicians from Gwinnett Technical College, Athens Technical College, and Fort Valley State College.

Student Services and Activities

The faculty, staff, and students of the College assist new students in developing communication and conflict resolution skills to help them become successful veterinary students. The College offers a variety of student services, including tutoring, academic skills workshops, academic advising, a mentor program, scholarships, and financial aid assistance.

Academic counseling is provided through the office of the Associate Dean for Academic Affairs. Students are encouraged to contact any faculty or staff member for help and advice when needed.

Student Organizations

The UGA chapter of the Student American Veterinary Medical Association encourages the personal and professional growth of students. One of its primary goals is to further the reputation of the College on campus, in the state, and nationwide. SCAVMA is also a means for relaying student feedback to the administration.

SCAVMA supports all clubs in the veterinary school, brings in speakers, publishes a monthly calendar of College activities, informs students about available externships and scholarships, promotes volunteerism in the community, enhances the curriculum by funding supplemental wet labs, conference travel, and other continuing education opportunities, and distributes *Intervet*, the national veterinary school publication by and about veterinary students, in addition to a variety of other functions and activities.

Two veterinary medical professional fraternities, Alpha Psi and Omega Tau Sigma, are prominent within the College. These co-educational fraternities are dedicated to fostering and encouraging understanding, cooperation, respect, professional interest, strong bonds of friendship, and participation in various areas of veterinary medicine.

Students may also join chapters of national associations concerned with various special areas of interest in veterinary medicine, including feline, aquatic, exotic, bovine, and equine associations, pathology, animal welfare and shelter medicine among others.

Honors and Awards

Honor societies recognize students each year for excellence in scholastic achievement, leadership, and character. Among these are Phi Zeta, a national veterinary medical honorary

society, and Phi Kappa Phi, a general science honorary society, both of which recognize excellence in scholarship and character. Service and leadership fraternities include Blue Key and Gamma Sigma Delta.

The College recognizes the many student achievements each spring during the annual Honors and Awards program. Students receive a variety of awards including endowed scholarships, annual awards and scholarships, and clinical performance awards, Awards are presented to students in all four years of the DVM curriculum.

Expenses

A current listing of anticipated expenses for attending the College of Veterinary Medicine can be found on the College website (www.vet.uga.edu/academic/life/fees.php)

Up-to-date information about requirements for admission and procedures for applying are on our admissions website: www.vet.uga.edu/admissions

Admission to the DVM Program

The College of Veterinary Medicine welcomes applications for admission from dedicated individuals who are not only highly qualified academically, but who have developed an awareness and appreciation for the needs of society as they relate to animal health and welfare. The selection of applicants is the responsibility of the Admissions Committee, which is appointed by the Dean.

Approximately 102 students are admitted each year. The Southern Regional Educational Board's contract with The University of Georgia provides for the enrollment of up to 2 from Delaware, up to 17 students from South Carolina and up to 6 from West Virginia. Up to 10 students may be accepted from areas other than these states and Georgia. The balance of those admitted are residents of Georgia.

Academic Preparation

The cumulative grade point average, science grade point average, and grade point average for the most recent 45 semester credit hours are each computed separately. Each accounts for 15% (45% total for academic credentials) of the overall admission score.

The cumulative grade point average will be computed from all courses taken within eight years immediately preceding the deadline for receipt of applications, plus fall term courses taken during the year of application.

If 20 semester (30 quarter) credit hours have not been completed within the last eight years, courses taken before the eight-year limit will be included in the cumulative grade point average.

Pre-veterinary Course Requirements

Requirements for admission to the College of Veterinary Medicine are based on the premise that the program of training a veterinarian is a continuous one shared by both the undergraduate college and the veterinary medical college.

The responsibility of the undergraduate training program is to provide prospective students with technical information and skills, but also to help develop a broad background of experience and interest to promote a full realization of their potential as individuals and as members of society.

All required courses must be completed by the end of the spring term before fall matriculation in the College of Veterinary Medicine. In general, meeting science requirements for admission to a college of veterinary medicine requires rigorous coursework supplemented with hands-on laboratory experiences and proctored examinations. Hence, prerequisite requirements cannot usually be met by online courses; laboratory requirements certainly cannot be met by online experiences. Graduate courses cannot be used to satisfy the science course requirements unless specifically requested and approved.

A grade of C (2.0) or better must be attained in all required courses, both science and non-science. If a required course is repeated after a grade of D or F is obtained, both the D or F grade and the grade obtained after repeating the course will be included in the cumulative grade point average. However, only the higher grade will be used to compute the science grade point average.

Students should pursue a well-rounded undergraduate degree program. The courses listed are not intended to minimize the importance of other less specific educational requirements.

Required Courses	Semester Hours	Quarter Hours
English	6	9
Humanities and Social Studies	14	20
Inorganic Chemistry (full year with laboratory)	8	10
Organic Chemistry (full year with laboratory)	8	10
Physics (full year with laboratory)	8	10
Biochemistry (laboratory not required)	3	5
General Biology for Science Majors (full year with laboratory)	8	10
Advanced Biological Science* (laboratory not required)	8	10

*Students should elect upper division courses to satisfy the Advanced Biological Science requirement. Comparative anatomy, microbiology, cell biology, and genetics are especially recommended. Behavior and ecology courses will not fulfill this requirement.

Standardized Tests

The Graduate Record Exam (GRE), and the GRE Biology Subject Test should be completed and the results received by the College by November 30th following the application deadline.

Additional Considerations

In addition to evaluating academic performance, the Admissions Committee considers previous activities and achievements, knowledge and experience with animals, farm background, knowledge of veterinary medicine as a profession, letters of recommendation, and a narrative statement completed by the applicant. Each applicant's performance in these areas is carefully evaluated by veterinary college faculty members.

Application Procedure

The College is a full participant in the Veterinary Medical College Application Service. Application materials must be obtained through the VMCAS website (www.aavmc.org). The completed application must be submitted electronically to VMCAS.

Official transcripts from all institutions of higher education attended by the applicant must be sent directly to the College by the application deadline.

Additional transcripts of grades obtained in the fall term must be received by February 1 from applicants who complete course work in the fall term.

Residency Policy

Preference for admission to the DVM degree program is given to residents of Georgia, Delaware, South Carolina, and West Virginia. Applicants from Delaware, South Carolina and West Virginia must be eligible for in-state tuition, as defined and determined by their respective state regulations. The determination of eligibility must be finalized for Delaware, South Carolina and West Virginia residents by February 1 of the year of matriculation.

For further information on residency,

Delaware residents should contact:
Delaware Higher Education Commission
Carvel State Office Building
820 N. French Street
Wilmington, DE 19801
(302) 577-5240
1-800-292-7935

South Carolina residents should contact:
South Carolina on Commission on Higher Education
1333 Main Street, Suite 200
Columbia, South Carolina 29201
(803) 737-2260

West Virginia residents should contact:
Associate Dean
College of Agriculture and Forestry
West Virginia University
Morgantown, West Virginia 26506-6108
(304) 293-2231 x4420

Georgia applicants seeking admission at the in-state tuition rate must apply by the October 1 deadline and must qualify fully for the in-state rate. More information regarding Georgia residency can be found at http://www.admissions.uga.edu/8_georgia_residency.html.

Georgia applicants who wish to appeal a University of Georgia denial of the in-state tuition rate must file the appeal with the University by February 1st of the year of application for admission.

Combined BS-DVM Program

After completing three years of undergraduate work at The University of Georgia, students can apply the first year of the DVM curriculum toward completion of the BS degree.

Further information can be obtained from the pre-veterinary advisors at the College of Agricultural and Environmental Sciences (706-542-3924) and the College of Arts and Sciences (706-542-1412).

Food Animal VIP Program

The Food Animal VIP is a joint effort between the College of Agricultural and Environmental Sciences (CAES) and the College of Veterinary Medicine (CVM). The goal of the Food Animal VIP is to recruit and train future veterinarians in food animal medicine for

under-served communities, central to the future of safe and successful food animal production. Up to five entering freshman attending the College of Agricultural and Environmental Sciences are selected annually. Successful completion of this program will result in admission into the University of Georgia College of Veterinary Medicine. Final admission is subject to review by the University of Georgia - College of Veterinary Medicine Admissions Committee. For further information contact 706-542-1611, discover@uga.edu or www.vet.uga.edu/populationhealth/foodanimal.

Admission of Graduate Students

All graduate students accepted to the DVM program must complete their graduate degree requirements prior to matriculation in veterinary medicine, unless exception to this rule is recommended by the applicant's major professor and department head.

Notification of Applicant Status

Notification of the College's action on applications will be mailed directly to applicants by the end of March. Accepted applicants may request deferral of matriculation for one year. These requests must be received by April 15.

Policies for Transfer to the College

The College rarely accepts transfer students from other veterinary schools. Applicants will be considered for entry up to the third year of the curriculum, when and if space is available as defined by the Admissions Committee.

Preference is given to qualified applicants in the following order:

1. Applicants who have been legal Georgia residents for at least 12 months immediately preceding August 1 of the year of requested matriculation
2. Residents of Delaware, South Carolina and West Virginia
3. All other applicants

Requests for transfer must be received by the College by April 15.

Further information on any aspect of the admissions process should be addressed as follows:

Office of the Associate Dean for Academic Affairs:

College of Veterinary Medicine
The University of Georgia
Athens, Georgia 30602-7372
Telephone: 706/542-5727
Email: dvmadmit@uga.edu

Housing for married and graduate students:

Family and Graduate Housing Office

The University of Georgia

Athens, Georgia 30602

Telephone: 706/542-1473

<http://www.uga.edu/housing/gradfam/graduate.html>

Payment of fees:
Bursar's Office
The University of Georgia
Athens, Georgia 30602
Telephone: 706/542-1625
<http://www.bursar.uga.edu/instructions.html>

Scholarships and loans:
Office of Student Financial Aid
The University of Georgia
Athens, Georgia 30602
Telephone: 706/542-6147
osfa@uga.edu
www.uga.edu/osfa

Grades

Each instructor responsible for a course will grade according to one of two systems: A, B, C, D, and F or S and U. The instructor will notify students at the beginning of the course which system will be used.

A - Grade to be given at discretion of the instructor

B - Grade to be given at discretion of the instructor

C - Grade to be given at discretion of the instructor

D - This is the minimal level of performance necessary to pass a course. The records of students receiving a grade of D will be automatically reviewed by a program of academic surveillance administered by the Dean's Office.

F - Less than a minimal level of performance necessary to pass a course. Students receiving an F grade in any course in the professional degree program will meet with the Scholarship and Appeals Committee, which will determine the recommended course of action.

I - Incomplete, this grade indicates that a student was doing satisfactory work but, for nonacademic reasons beyond his/her control, was unable to meet the full requirements of the course.

W - This grade indicates that a student was permitted to withdraw from the course and that no grade was assigned.

WF - This grade indicates that the student was permitted to withdraw from the course while doing F or U work. Dropping a course under these circumstances is equivalent to a failure.

S - This grade indicates satisfactory work in a course and that no grade was assigned.

U - This grade indicates unsatisfactory work in a course or clinical rotation with a level of performance less than that necessary to pass.

AU-This grade indicates an audit.

Numerical Equivalents of Grades

For the purposes of computing yearly and cumulative grade point averages, letter grades will be converted into numerical equivalents on the following basis:

A = 4.0 C+ = 2.3

A- = 3.7 C = 2.0

B+ = 3.3 C- = 1.7

B = 3.0 D = 1.0

B- = 2.7 F = 0.0

I = not computed

S = 0.0 Credit is included in hours earned, but the grade is not included in the academic average
U = 0.0 No credit is given for hours taken, and the grade is not included in the academic average
AU = 0.0 No credit is given, and the grade is not included in the academic average
W = 0.0 Not computed
WF = 0.0 A grade reported by the instructor to the registrar and recorded cannot be changed unless there is a factual error in the original reporting of the grade

Academic Standing

The following outlines general academic standing policies for the College of Veterinary Medicine. Course syllabi may describe additional policies for academic standing in particular courses. Students may request a more detailed copy of the Academic Standing Policies.

Students receiving a grade of A, B, C, D, or S, or those having "I" grades to be converted to A, B, C, D, or S, within 3 semesters shall be permitted normal progress through the curriculum, provided a minimum 2.00 grade point average is achieved for each respective year of the curriculum.

A student who has a cumulative grade point average of less than 2.00 for any of the first three years of the curriculum will be referred to the Scholarship and Appeals Committee. The Scholarship and Appeals Committee will make a recommendation to the Dean as to whether the student should be dismissed or allowed to re-enroll, and under what conditions.

Probation

Students who receive a D in any course, or who have a cumulative grade point average of 2.2 or less during or for any academic year, will be placed on academic probation.

Students on academic probation will not be excused from classes for extracurricular activities.

Students on academic probation will be advised and offered academic assistance by the Associate Dean for Academic Affairs. Students on academic probation may be referred to the Scholarship and Appeals Committee for review of their academic performance.

Students will be released from academic probation when their current year cumulative grade point average is greater than 2.2, and they have completed at least 10 credit hours of work with grades of C or better since being placed on probation.

A student who receives an F or U grade in a course will be referred to the Scholarship and Appeals Committee.

The committee will consider each case and make a recommendation to the Dean as to whether the student should be dismissed or allowed to re-enroll, and under what conditions. The student will be given a current copy of the policies and procedures regarding failure of a course.

Dismissal and Withdrawal

If a student in years 1 through 3 is dismissed, that student will withdraw from all courses in which he or she is currently enrolled except those in which 50% or more of the scheduled contact hours have been completed with work that merits a grade of C or better. Once that course work is completed, the student will no longer be enrolled in the College of Veterinary Medicine.

A fourth-year student who is dismissed will withdraw from all uncompleted courses in which he or she is registered, and the student will no longer be enrolled in the College of Veterinary Medicine. First-year students who are dismissed may apply to the Admissions Committee for readmission. All other dismissed students may apply for readmission to the Scholarship and Appeals Committee.

A student may not withdraw from a course in the professional degree program without the permission of the Dean or Associate Dean. A student who withdraws from a course will be assigned a grade of W or WF depending upon their progress in the course.

Class Attendance

Unless stated otherwise by the instructor, students are expected to attend all classes, laboratories, clinic rotations, and other appropriately assigned duties. The unexcused absence or cut is not recognized as a student privilege by the College of Veterinary Medicine.

Each instructor assumes some responsibility for monitoring class attendance, but students are also responsible for their actions or lack of action. Instructors have the option of amending college policy in the course syllabus.

Students must be excused by the instructor and the Associate Dean for Academic Affairs if they are to miss any class, clinical rotation, or testing session other than lectures.

Absence from examinations, clinical rotations, and laboratory experiences will not be taken lightly, and the Office for Academic Affairs will work closely with instructors to enforce College and individual course policy. An excused absence does not relieve students of their academic responsibilities.

Academic Honesty

Academic integrity is an adherence to a high standard of values regarding life and work in an academic community. Pursuit of knowledge and the creation of an atmosphere conducive to learning are both definite aspects of academic integrity, but its basis lies in the standard of honesty.

Students at The University of Georgia are responsible for maintaining and adhering to the strictest standards of honesty and integrity in every aspect of their lives. Honesty in academic matters is a large part of this obligation. Specific regulations governing student academic conduct and procedures to be followed when violations are reported are contained in the Student Handbook.

Code of Conduct

Students in the College of Veterinary Medicine are expected to conduct themselves in a manner that will reflect positively on themselves, the College of Veterinary Medicine, The University of Georgia, and the veterinary medical profession.

In addition to abiding by all federal, state, and local laws, students are expected to follow the conduct regulations outlined in the following documents: College of Veterinary Medicine Student Handbook, Student Handbook of The University of Georgia, Principles of Veterinary Medical Ethics of the American Veterinary Medical Association, and Model Veterinary Practice Act of the American Veterinary Medical Association.

Safety

Laboratories and clinics in the College of Veterinary Medicine have inherent physical and biological hazards of which one must be aware for one's own safety, as well as the safety of one's family and friends. Physical facilities in the College are designed to provide protection, but must be operated properly.

Some of the risks include handling or being near animals, slick floors or corrals, use of toxic or corrosive substances, and the use of sharp or breakable instruments and equipment.

Students must wear lab coats, coveralls, boots, or other protective clothing when required. Such clothing will not be worn outside the College of Veterinary Medicine.

All students in the DVM degree program are required to have current immunization for rabies. Current immunization against tetanus also is recommended. By voluntarily participating in classes, laboratories, and clinical activities, the student acknowledges and agrees to assume the risks involved and not hold the University or the staff of the College of Veterinary Medicine liable.

Students may wish to obtain medical insurance in addition to that provided by the University Health Service plans.

Classes and Examinations

The scheduling of course sequences, classes, laboratories, and examinations is the responsibility of the Curriculum Committee. Class schedules are generated by the Program Coordinator after consultation with the Associate Dean for Academic Affairs, the Curriculum Committee, and faculty members.

Classes are generally scheduled to require approximately 60 hours per week of student effort, including time in classrooms, labs, and preparation time. Changes in the class schedule can be made only by approval of the Program Coordinator or the Associate Dean for Academic Affairs.

The Office of the Associate Dean for Academic Affairs and the Curriculum Committee have final authority to schedule all examinations. End-of-course examinations are scheduled by the Program Coordinator and printed on the weekly schedule of classes.

When possible, all other examinations and quizzes will also be printed on the weekly class schedule. Every attempt is made to resolve test date conflicts and to allow students adequate time to prepare for all examinations.

Rounds and Seminars

Rounds or seminar courses can be developed with the approval of the department head for the instruction of senior veterinary students and/or residents and interns. Such activities are open to all students and staff.

Undergraduate professional students must have approval from the Curriculum Committee in order to take formal seminar courses offered for University credit. Interns, residents, or advanced degree candidates must have the approval of the Graduate Affairs Committee.

Sequential Curriculum

The sequential curriculum is a modified block program of instruction. Courses are sequenced in order by their logical relationships or prerequisite features. The length of each course is determined by total contact hours required to present the information in the core curriculum. In addition, student effort hours per week also help determine the length of each course.

The sequential curriculum does not follow either traditional quarter or semester calendars, and courses within the sequential curriculum begin and end independently of each other. Courses are presented based on perceived student needs, and are not locked into a predetermined academic term as in traditional academic calendars.

Courses are scheduled within three academic years. Breaks are provided in accordance with the University Academic Calendar.

Credit hours, grade reports, and student fees are reported to the University based on the semester calendar currently utilized by the Regents for Higher Education. For the purposes of University accountability, courses will be designated either fall or spring semester, even though the date for a particular course may not match the University semester calendar.

There are no traditional final examination weeks as in quarter or semester calendars.

First Year

Core Courses

VARB 5150	Anatomy Principles & Gross Anatomy of the Dog	(4.5)
VARB 5120	Lab on Comp Anat of the Horse and Food Animal	(4.6)
VARB 5170	Veterinary Cell Biology	(1.0)
VARB 5180/5180L	Microscopic Anatomy of Domestic Animals	(3.0)
VARB/VPHY 5190	Veterinary Neuroanatomy & Neurophysiology	(2.6)
VPHY 5100	Animal Physiological Chemistry	(2.0)
VPHY 5120	Cardiovascular Physiology	(0.8)
VPHY 5130	Respiratory Physiology	(0.6)
VPHY 5140	Gastrointestinal Physiology	(0.6)
VPHY 5150	Endocrinology and Reproduction	(2.3)
VPHY 5160	Renal and Body Fluid Physiology	(1.3)
VPHY 5170	Basic Comparative Animal Nutrition	(1.6)
IDIS 5130/5130L	Veterinary Bacteriology and Mycology	(3.4)
IDIS 5140/5140L	Veterinary Virology	(2.2)
IDIS 5150/5150L	Veterinary Immunology	(2.5)
LAMS/SAMS 5150	Physical Diagnosis	(1.3)
VETM 5100	Veterinary Ethics and Jurisprudence	(0.6)
VETM 5110	Veterinary Medicine: An Umbrella of Opportunities	(1.0)
Total semester credit hours		35.9

First Year Elective Courses

IDIS 5100	Molecular Biology for Veterinarians	(1.0)
LAMS/POPH 5160	Large Animal Infectious Diseases	(1.5)
LAMS 5170	Using Multimedia in your Practice	(1.0)
POPH 5180	Public Health	(1.0)
POPH 5215	Animal Welfare	(0.6)
POPH 5230	Special Topics in Population Health	(0.6-1.0)
SAMS 5100	Emergency & Critical Care Basics	(1.4)
SAMS 5117	Wildlife Medicine Clinical Elective	(0.5 – 1.5)
SAMS 5118	Conservation Medicine	(5.2)
SAMS 5120	Communication Skills for the Veterinary Profession	(1.5)
SAMS 5125	Intro to Clinical Thinking	(1.0)
SAMS 5217	Small Mammal & Aquatic Medicine	(1.0)
VARB 5105/5105L	Clinical Anatomy of Large Animals	(1.0)
VETM 5201	International Veterinary Medicine	(1.0)

Second Year

Core Courses

VARB 5240	Veterinary Animal Behavior	(1.2)
VPHY 5200	Principles of Pharmacology	(3.1)
VPHY 5220	Veterinary Toxicology	(1.2)
POPH 5240	Epidemiology and Preventive Medicine	(2.0)
IDIS 5200/5200L	Veterinary Parasitology	(3.7)
VPAT 5200/5200L	General Animal Pathology	(2.8)
VPAT 5215	Systemic Pathology I	(2.0)
VPAT 5250/5250L	Clinical Pathology	(3.6)
SAMS/LAMS 5205/5205L	Comparative Clinical Dermatology	(1.0)
LAMS/SAMS 5203	Principles of Anesthesia	(1.1)

POPH 5280	Applied Preventative Health	(0.4)
SAMS 5200	Veterinary Ophthalmology	(1.3)
SAMS 5220	Polysystemic Dis: Hematology & Endocrinology	(1.3)
SAMS 5240	Principles of Surgery	(0.7)
SAMS 5250	General Surgery Practicum	(1.0)
Total semester credit hours		26.4

Second Year Elective Courses

IDIS 5100	Molecular Biology for Veterinarians	(1.0)
IDIS 5215/5215L	Large Animal Parasitology	(1.3)
IDIS 5220/5220L	Small Animal Advanced Parasitology	(1.0)
LAMS 5170	Using Multimedia in your Veterinary Practice	(1.0)
LAMS 5211/5211L	Equine Dentistry	(1.0)
LAMS 5220	Large Animal Advanced Anesthesia	(1.1)
LAMS 5230	Large Animal Medicine I: Urology, Hematology & Endocrinology	(1.3)
LAMS 5240	Problems in Large Animal Medicine	(1.0)
LAMS 5250	Clin Tech in Large Animal Med & Surgery	(1.0)
LAMS 5290	Veterinary Obstetrics	(0.9)
POPH 5200	Management for Food Animal Health & Production	(2.0)
POPH 5201	Wildlife Diseases	(1.0)
POPH 5202	Lab Animal Medicine: Husbandry, Diseases & Management of Laboratory Animals	(1.1)
POPH 5203L	Tech in Lab Animal Medicine	(0.3)
POPH 5215	Animal Welfare	(0.6)
POPH5230	Special Topics in Population Health	(0.6 – 1.0)
POPH 5250	Poultry Diseases	(2.0)
SAMS 5105	Small Animal Infectious Diseases	(1.5)
SAMS 5116	Zoo and Wildlife Medicine	(2.0)
SAMS 5117	Wildlife Medicine Clinical Elective	(0.5 – 1.5)
SAMS 5118	Conservation Medicine	(5.2)
SAMS/LAMS 5201	Advance Clinical Dermatology	(1.3)
SAMS 5217	Small Mammal & Aquatic Medicine	(1.0)
SAMS 5218	Avian & Reptile Medicine & Surgery	(1.5)
SAMS 5221	Small Animal Clinical Endocrinology	(1.5)
SAMS 5230	Small Animal Urology	(2.0)
SAMS 5265	Topics in Small Animal Dentistry	(0.6)
SAMS 5275	Shelter Medicine	(1.0)
VARB 5105/5105L	Clinical Anatomy of Large Animals	(1.0)
VARB 5200	Equine Behavior	(1.0)
VARB 5212	Behavior Problems in Cats	(0.5)
VARB 5214	Behavior Problems in the Dog	(1.0)
VARB 5220	Studies in Applied and Domestic Animal Behavior	(0.7-3.3)
POPH 5180	Public Health	(1.0)
VPAT 5220	Veterinary Forensics and Forensic Pathology	(1.0)
VPHY 5215	Introduction to Veterinary Botanical Medicine	(1.0)

Third Year

Core Courses

VARB 5310	Radiology	(3.5)
VPAT 5316	Systemic Pathology II	(2.0)
LAMS 5310	Large Animal Theriogenology Selective	(2.6)
LAMS 5311	Small Animal Theriogenology Selective	(1.4)
SAMS/LAMS 5305	Neurology	(1.2)
SAMS/LAMS 5333	Respiratory Diseases	(1.3)
SAMS/LAMS 5355	Cardiology	(0.6)
LAMS 5350	Large Animal Digestive Diseases	(1.9)
SAMS/LAMS 5373	Small & Large Animal Basic Surgical Techniques	(1.5)
SAMS 5350	Small Animal Digestive Diseases	(1.2)
LAMS/SAMS 5359	Musculoskeletal Diseases	(2.0)
VETM 5300	Veterinary Practice Management	(1.6)
Total semester credit hours		20.8

Junior Year Elective Courses

LAMS 5211/5211L	Equine Dentistry	(1.0)
LAMS 5301	Ruminant Respiratory Disease	(1.0)
LAMS 5313	Equine Respiratory Dis	(1.0)
LAMS 5314	Large Animal Neurology	(1.0)
LAMS 5315	Equine Clinical Diagnostic Imaging	(1.6)
LAMS 5323	Large Animal Cardiology	(0.6)
LAMS 5351	Equine Digestive Diseases	(1.0)
LAMS 5353	Equine Lameness and the Foot	(1.0)
LAMS 5363	Large Animal Emergency Medicine & Surgery	(1.3-7.8)
LAMS 5375	Equine Surgery I: Musculoskeletal	(1.0)
LAMS 5376	Equine Surgery II: Soft Tissue Surgery	(1.0)
LAMS 5380	Large Animal Advanced Surgical Techniques	(1.0)
LAMS 5385	Bovine Surgery	(1.0)
LAMS 5395	Artificial Insemination, Embryo Transfer and Adv Repro Tech	(0.8)
POPH 5202	Lab Animal Medicine: Husbandry, Diseases & Management of Laboratory Animals	(1.1)
POPH 5230	Special Topics in Population Health	(0.6-1.0)
POPH 5312	Ruminant Internal Medicine: Digestive Diseases	(1.0)
POPH 5390	Diseases of Swine	(1.3)
SAMS 5116	Zoo and Wildlife Medicine	(2.0)
SAMS 5117	Wildlife Medicine Clinical Elective	(0.5 – 1.5)
SAMS 5302	Small Animal Oncology	(1.3)
SAMS 5218	Exotic Animal Medicine – Avian & Reptile	(1.5)
SAMS 5315	Small Animal Advanced Digestive Diseases	(1.0)
SAMS 5325	Small Animal Advanced Anesthesia	(1.0)
SAMS 5326	Small Animal Clinical Neurology	(1.3)
SAMS 5335	Advanced Ophthalmology	(1.5)
SAMS 5336	Small Animal Respiratory Diseases	(1.0)
SAMS 5345	Small Animal Musculoskeletal Diseases	(1.4)
SAMS 5346	Small Animal Cardiology	(1.5)
SAMS 5372	Small Animal Advanced Surgical Techniques	(1.4)
SAMS 5395	Adv Topics in Emergency and Critical Care	(1.3)

VARB 5200	Equine Behavior	(1.0)
VARB 5220	Studies in Applied and Domestic Animal Behavior	(0.7 – 3.3)
VPAT 5301	Studies in Diagnostic Pathology	(1.0)

Fourth Year

The fourth year begins immediately following the conclusion of the third year. Each student is required to register for each of the three semesters during the fourth year. The fourth year program is continuous, with courses scheduled during holidays and semester breaks.

Each course is taught basically as a 2 or 3 week block with approximately six blocks scheduled per semester. Some courses (blocks) may end or begin during holidays or semester breaks. Students take each course as a separate block; however, in some elective courses, blocks are combined to maximize the student's time. The fourth year program allows veterinary students flexibility to concentrate their interests in special areas.

Required Rotations

VARB 5480	Clinical Radiology	(3.9)
VPAT 5400	Diagnostic Pathology	(3.9)
SAMS 5475	Small Animal Community Practice	(3.9)
SAMS 5405	Clinical Anesthesiology	(3.9)

In addition, each required course may be repeated as an elective course for students desiring more experience in these areas.

Students must schedule a minimum of 74.1 semester hours during the four semesters of the fourth year. Depending on the student's area of emphasis, the required courses account for 18.2 to 41.6 credit hours of the 74.1 each student must take. The remaining required semester credits of the 74.1 credit hours depends on the student's area of emphasis.

Externships

The externship courses are elective. Each externship may be 2 to 4 weeks long and may be repeated for credit (up to 7.8 semester credit hours) but cannot exceed 6 weeks of contact time. A minimum of 2 weeks (1.3 semester credit hours/week) is required to earn credit. Students must arrange the length of each externship with the supervisor of the program and must register the program in the Office for Academic Affairs. Most students will elect to spend 3-4 weeks in each externship.

Courses

Population Health (POPH)

POPH 3730. Poultry Health. 3 hours.

Oasis Title: POULTRY HEALTH.

Not open to students with credit in AVMD 3730.

Prerequisite: POUL 3600 and MIBO 3500.

Common infectious, parasitic, and nutritional diseases of poultry: the cause, diagnosis, prevention, and control. Offered to students majoring in poultry science and others who are qualified.

(POPH)MIBO 4220/6220. Pathogenic Bacteriology. 3 hours.

Oasis Title: PATHOGEN BACTERIOL.

Undergraduate prerequisite: MIBO 3500.

Molecular basis of bacterial virulence: identification of virulence factors, genetic regulation of virulence, and the complex interactions between bacterial pathogens and their hosts.

POPH(IDIS)(MIBO) 4450/6450-4450L/6450L. Microbial Genetics and Genomics. 4 hours. 3 hours lecture and 2 hours lab per week.

Oasis Title: MICROBIAL GENETICS.

Not open to students with credit in MIBO 4800L/6800L or MMIB 4450/6450.

Undergraduate prerequisite: MIBO 3500.

Graduate prerequisite: MIBO 3500 or permission of department.

Molecular basis of gene regulation in microorganisms with emphasis on systems pertaining to pathogenesis, evolution, and ecology. computer lab includes examination of evolutionary relatedness, sequence comparisons, database searches and reconstruction of metabolic pathways.

POPH 4900L. Directed Research for Undergraduate Students. 4 hours.

Oasis Title: DIRECTED RESEARCH.

Prerequisite: Permission of department.

Independent laboratory research in infectious disease pathogenesis and epidemiology under the direction of a faculty member.

(POPH)LAMS 5160. Large Animal Infectious Diseases. 1.5 hours.

Oasis Title: LARGE AN INFECT.

Prerequisite: DVM student.

A review of the principles of infectious diseases of large animals, the mechanisms by which microorganisms infect and cause disease, how the immune response contributes to disease, the principles of infectious disease epidemiology, and how antimicrobials and vaccines can be used rationally to control these diseases.

POPH 5200. Management for Food Animal Health and Production. 1.7 hours.

Oasis Title: FA HEA AND PROD MGT.

Not open to students with credit in LAMS 5200.

Prerequisite: Completion of the 2nd year core fall veterinary curriculum.

Health care and management procedures for food producing animals.

POPH 5201. Wildlife Diseases. 1 hour.

Oasis Title: WILDLIFE DISEASES.

Not open to students with credit in MMIB 5200 or IDIS 5201.

Prerequisite: Must be at least a 2nd-year DVM student.

This is an introductory course in conservation/wildlife biology designed for DVM students. Emphasis will be placed on wildlife diseases and their potential impacts on free-ranging wildlife populations.

POPH 5202. Laboratory Animal Medicine: Husbandry, Diseases, and Management of Laboratory Animals. 1 hour.

Oasis Title: LAB ANIMAL MEDICINE.

Not open to students with credit in VETM 5202.

Prerequisite: This course is open to second or third year veterinary students.

This is an elective course for students who are interested in learning about the care and use of common laboratory animals as well as being introduced to the specialty of laboratory animal medicine.

POPH 5203L. Techniques in Laboratory Animal Medicine. 0.3 hour.

Oasis Title: ANIMAL RES TECH.

Prerequisite: POPH 5202.

Humane methods of animal maintenance and experimentation; the testing methods which minimize animal distress; use of anaesthetics, analgesics, and tranquilizers for commonly used lab species.

POPH 5215. Animal Welfare. 0.6 hour.

Oasis Title: ANIMAL WELFARE.

Background concepts and principles of animal welfare. Students will be provided with information regarding current issues of animal welfare pertinent to veterinary medicine.

POPH 5230. Special Topics in Population Health. 0.6 hour. Repeatable for maximum 1.2 hours credit.

Oasis Title: VET POPH.

Presentation and discussion of published research and new developments in population health.

POPH 5240. Epidemiology and Preventive Medicine. 2.7 hours.

Oasis Title: EPIDEMIOLOGY.

Not open to students with credit in MMIB 5250 or IDIS 5250.

Prerequisite: Permission of department.

The applications of epidemiology to veterinary clinical medicine. The zoonotic diseases of topical interest, with special emphasis on the foodborne diseases associated with red meat and poultry.

POPH 5250. Poultry Diseases. 2 hours.

Oasis Title: POULTRY DISEASES.

Not open to students with credit in AVMD 5250.

Prerequisite: Enrollment in the 2nd year of the veterinary medicine curriculum.

The etiology, epidemiology, pathogenesis, diagnosis, prevention, control, and treatment of infectious, nutritional, and parasitic diseases of poultry.

POPH 5280. Applied Preventive Health. 0.4 hour.

Oasis Title: APP PREV HEALTH.

Not open to students with credit in LAMS 5280.

Study of preventive health management programs common across animal species.

POPH 5312. Ruminant Internal Medicine: Digestive Diseases. 0.5 hour.

Oasis Title: RUM DIG DIS.

Not open to students with credit in LAMS 5312.

Prerequisite or corequisite: LAMS 5350.

This course will use a case oriented approach to review common digestive disorders in ruminants. Students will be expected to generate a tentative etiologic list, and a diagnostic and therapeutic (preventive health) plan after being presented with a clinical situation involving cattle, sheep, or goats.

POPH 5390. Diseases of Swine. 1.3 hours.

Oasis Title: DIS OF SWINE.

Not open to students with credit in LAMS 5390.

Prerequisite: Second year veterinary curriculum.

Review of diseases encountered in swine practice.

POPH 5400. Avian Medicine Clinical Rotation. 1.3-3.9 hours.

Oasis Title: AVIAN MED CLIN ROTA.

Not open to students with credit in AVMD 5400.

Prerequisite: Enrollment in the College of Veterinary Medicine professional curriculum.

Prerequisite or corequisite: AVMD 5250.

In-depth study of a speciality area of avian medicine.

POPH 5410. Wildlife Population Health. 3.9-7.8 hours.

Oasis Title: WILDLIFE POPULATION.

Not open to students with credit in PARA 5410 or IDIS 5410.

Prerequisite: Permission of department.

Exposure to the many aspects of wildlife population health. Students will participate in field and laboratory projects, attend meetings of staff to discuss research projects, and conduct a library project on a salient disease topic.

POPH 5445. Food Animal Practice. 1.3-3.9 hours.

Not open to students with credit in LAMS 5445.

Prerequisite or corequisite: LAMS 5200.

Clinical training in food animal practice with a focus on disease and performance concerns.

POPH 5446. Food Animal Practice - Beef Cattle. 3.9-7.8 hours.

Oasis Title: FA PRACTICE - BEEF.

Not open to students with credit in LAMS 5446.

Prerequisite or corequisite: LAMS 5200.

Development of health and management program for large population of beef cattle.

POPH 5447. Dairy Production Medicine. 3.9-7.8 hours.

Oasis Title: DAIRY PROD MED.

Not open to students with credit in LAMS 5447.

Prerequisite: LAMS 5200.

Students will express findings, concepts, and plans in written and oral format as well as identify

and resolve clinical and subclinical disease problems; work with a dairy producer to develop preventive health and management; conduct risk assessments for disease and production problems; analyze data collected by DHIA and producers using PCDART; understand economics of dairy farming and establish production goals for a dairy producer and implement management practices to meet them.

POPH 5448. Food Animal Practice - Swine. 3.9-7.8 hours.

Oasis Title: SWINE PRACTICE.

Not open to students with credit in LAMS 5448.

Prerequisite: LAMS 5200.

Development of health and management programs for swine herds.

POPH 5449. Studies in Food Animal Production. 3.9 hours.

Oasis Title: STUDIES FA TIFTON.

Prerequisite: Third-year or fourth-year student in the College of Veterinary Medicine and permission of department.

Improve the student's knowledge of a variety of large animal medical and production situations and enable the student to address these problems in an actual production setting.

POPH 5900. Studies in Population Health. 0.7-8 hours.

Oasis Title: PH STUDIES.

Prerequisite: Must be a DVM student.

Prerequisite or corequisite: POPH 5200.

Studies involving different areas of food animal health, population medicine, or theriogenology.

POPH 5901. Studies in Clinical Avian Medicine. 0.7-8 hours.

Oasis Title: AVIAN MED STUDIES.

Not open to students with credit in AVMD 5900.

Prerequisite: Enrollment in the College of Veterinary Medicine professional curriculum.

In-depth studies into a specialty area of avian medicine.

POPH 6050. Avian Diseases. 3 hours.

Oasis Title: AVIAN DISEASES.

Not open to students with credit in AVMD 6050.

Prerequisite: Permission of department.

The signs of specific poultry diseases, their causes, and contributing management factors.

POPH 6100. Clinical Avian Medicine. 3 hours.

Oasis Title: CLINICAL AVIAN MED.

Not open to students with credit in AVMD 6100.

Prerequisite: Permission of department.

Through study of case material, students learn to integrate laboratory test results into an accurate diagnosis. Appropriate treatment and prevention plans will be formulated.

POPH 6110. Problems in Food Animal Infectious Disease. 2 hours.

Oasis Title: PROB FA INF DIS.

Not open to students with credit in LAMS 6110.

Prerequisite: Permission of department.

Diseases of cattle, small ruminants, and swine will be studied, with emphasis on mechanisms of pathogenesis and approach to diagnosis, treatment, and control of infectious diseases in herd settings.

POPH 6120. Food Animal Medicine Clinical Rounds. 1 hour.

Oasis Title: FA CLINIC ROUND.

Not open to students with credit in LAMS 6120.

Prerequisite: Permission of department.

Faculty and students discuss in detail clinical cases commonly encountered in food animal disease and production.

POPH 6121. Avian Medicine Clinical Rounds. 1 hour.

Oasis Title: CLINICAL ROUNDS.

Not open to students with credit in AVMD 6120.

Prerequisite: Permission of department.

Faculty and students will discuss in detail clinical cases representing current avian disease problems.

POPH 6130. Food Animal Production Medicine Seminar. 1 hour.

Oasis Title: FA PROD MED SEMINAR.

Not open to students with credit in LAMS 6130.

Prerequisite: LAMS 6100 and permission of department.

Presentation and discussion of diagnostic cases and research in production food animal medicine.

POPH 6140. Applied Veterinary Economics. 1.5 hours.

Oasis Title: VET ECON.

Not open to students with credit in LAMS 6140.

A comparison of methods used to evaluate the utility of veterinary practice and procedures with a focus on economic outcomes.

POPH 6141. Avian Necropsy. 1-3 hours.

Oasis Title: AVIAN NECROPSY.

Not open to students with credit in AVMD 6140.

Prerequisite: Permission of department.

Necropsy procedures applied to diagnosis of avian diseases. Use of necropsy case material to correlate function with structure; appropriate therapeutic and prophylactic measures are discussed and recommendations for clients determined. Problem-oriented medical records maintained for discussion and audit.

POPH 6150. Problems and Current Issues in Food Animal Practice. 1 hour.

Oasis Title: PROB & CURRENT ISS.

Not open to students with credit in LAMS 6150.

Prerequisite: Permission of department.

An overview of problems and current issues encountered in food animal practice, including time management, communications, client interaction, personnel management, conflict management, contracts, value-based assessment, team working, and process management.

POPH 6160. Special Problems in Food Animal Medicine. 1-3 hours.

Oasis Title: FA SPECIAL PROB.

Not open to students with credit in LAMS 6160.

Prerequisite: LAMS 6100 and permission of department.

Directed investigation of clinical cases; preparation leading to the definition, hypothesis, and plan of an applied research study; development of complex models addressing food animal economics or disease; scholarly activity required for publication of case studies or clinical trials;

directed demonstration of skills not fully addressed by other coursework.

POPH 6210. Avian Medicine Externship. 7 hours. 40 hours lab per week.

Oasis Title: AVIAN MED EXTERN.

Not open to students with credit in AVMD 6210.

Prerequisite: Permission of department.

Independent off-campus experience working as a veterinarian in commercial poultry companies, allied industries, or diagnostic laboratories.

POPH 6230. Problems in Epidemiology and Statistics. 2 hours.

Oasis Title: PROBLEMS EPI & STAT.

Not open to students with credit in LAMS 6230.

Prerequisite: Permission of department.

Evaluation of herd level disease and production issues using case record datasets, with emphasis on data management and analysis.

POPH 6240. Food Animal Production Medicine Externship. 8 hours.

Oasis Title: FA EXTERNSHIP.

Not open to students with credit in LAMS 6240.

Prerequisite: Permission of department.

Corequisite: LAMS 6250.

Independent off-campus experience working as a veterinarian in a commercial food animal production company, pharmaceutical, biologic, animal regulatory agency, or diagnostic laboratory.

POPH 6250. Directed Studies in Food Animal Clinical Research. 7 hours.

Oasis Title: FA CLINICAL RES.

Not open to students with credit in LAMS 6250.

Prerequisite: Permission of department.

Corequisite: LAMS 6240.

Development, execution, and summarization of a clinical research study in cooperation with a food animal production company, pharmaceutical company, biologics company, diagnostic laboratory, or animal regulatory agency.

POPH 6700. Clinical Food Animal Medicine. 3 hours.

Oasis Title: CLINIC FA PROD MED.

Not open to students with credit in LAMS 6100.

Prerequisite: Permission of department.

Through study of case material, students learn to integrate clinical and laboratory findings into an accurate diagnosis. Appropriate treatment and prevention plans will be formulated.

POPH 6800. Avian Pharmacology and Toxicology. 3 hours. 6 hours lab per week.

Oasis Title: AVIAN PHARM/TOX.

Not open to students with credit in AVMD 6800.

Prerequisite: Permission of department.

Chemistry, mechanisms of action, legal dosages, residue concerns, and analysis of antibiotics, minerals, vitamins, anthelmintics, mycotoxins, and other naturally-occurring toxicants impacting commercial poultry production.

POPH 7060. Avian Diagnostic Microbiology. 3 hours.

Oasis Title: AVIAN MICROBIOLOGY.

Not open to students with credit in AVMD 7060.

Prerequisite: Permission of department.

Corequisite: AVMD 7060L.

Intense practical experience in acquisition, handling, and processing of clinical microbiological specimens. Areas covered include processing techniques, culture techniques, media selection, screening methods, interpretation of cultures, traditional and rapid identification methods, antimicrobial sensitivity testing, special recovery and enrichment techniques, hatchery microbiology, HACCP and processing.

POPH 7060L. Avian Diagnostic Microbiology Laboratory. 1 hour. 3-4 hours lab per week.

Oasis Title: AVIAN MICRO LAB.

Not open to students with credit in AVMD 7060L.

Prerequisite: Permission of department.

Corequisite: AVMD 7060.

Laboratory to be taken in conjunction with Avian Diagnostic Microbiology. The laboratory will apply techniques discussed in lectures.

POPH 8050. Avian Virus Diseases. 3 hours.

Oasis Title: AVIAN VIRUS DIS.

Not open to students with credit in AVMD 8050.

Prerequisite: Permission of department.

The serological and virological methods used to isolate and identify avian viruses of economic importance. Cell culture systems are prepared and infected with different viruses to observe their effect. Specific projects are undertaken to familiarize the student with current virological techniques.

POPH 8050L. Avian Virus Diseases Laboratory. 1 hour. 1-4 hours lab per week.

Oasis Title: AVIAN VIRUS LAB.

Not open to students with credit in AVMD 8050L.

Prerequisite or corequisite: AVMD 8050.

Laboratory to be taken in conjunction with Avian Virus Diseases. The laboratory will apply techniques discussed in lecture to identify viruses of importance to poultry.

POPH 8110. Problems in Poultry Diseases and Parasites. 3 hours. 9 hours lab per week.

Oasis Title: PROBLEMS IN POULTRY.

Not open to students with credit in AVMD 8110.

Prerequisite: Permission of department.

Students work intensively on approved problems in the field of poultry health after selection of the specialized area with the appropriate staff member.

POPH 8150. Avian Medicine Seminar. 1 hour.

Oasis Title: AVIAN MED SEMINAR.

Not open to students with credit in AVMD 8150.

Prerequisite: Permission of department.

Presentation and discussion of current diagnostic cases and research activities in the area of avian medicine.

POPH 8160. Scientific Manuscript Writing. 3 hours.

Oasis Title: MANUSCRIPT WRITING.

Not open to students with credit in AVMD 8160.

Prerequisite: AVMD 8110.

Scientific writing techniques, literature retrieval skills, data analysis, and manuscript formatting are utilized in the development of a publishable manuscript to improve students written communication skills. Data obtained during "Problems in Poultry Diseases and Parasites" is expected to be used as subject matter for manuscript writing.

POPH(IDIS)(MIBO) 8200. Experimental Design in Molecular Microbiology. 5 hours.

Oasis Title: EXP DESIGN MOL MICR.

Not open to students with credit in MMIB 8200.

Prerequisite: IDIS 4220/6220 and BCMB 4020/6020.

Medical pathogens emphasizing molecular techniques.

POPH 8230. Special Topics in Population Health. 2 hours.

Oasis Title: SPEC TOPICS POPH.

Presentation and discussion of published research and new research developments.

POPH 8580. Current Topics in Wildlife Health. 1 hour.

Oasis Title: WILDLIFE HEALTH.

Not open to students with credit in PARA 8580 or IDIS 8580.

Prerequisite: Permission of department.

Ongoing disease investigations, research, and wildlife health issues will be reviewed and discussed weekly.

fall, spring, and summer semesters every year.

POPH 8900. Problems in Population Health. 1-6 hours.

Oasis Title: PROB POP HEALTH.

Intensive study, under the direction of faculty, on management approaches and current issues in the diagnosis of disease and health maintenance of domestic and wild animal populations.

Physiology and Pharmacology (VPHY)

VPHY 3100. Elements of Physiology. 3 hours.

Oasis Title: ELEMENTS OF PHYSIOL. Undergraduate course.

The mammalian body as a single functional unit; studies include nervous, muscular, respiratory, circulatory, digestive, renal, endocrine, and reproductive systems.

VPHY 5100. Animal Physiological Chemistry. 2 hours.

Oasis Title: ANIMAL PHYS CHEM.

Prerequisite: Permission of department. First year veterinary student.

Biochemistry of metabolism applied to the whole animal. Biochemistry of blood elements of medical significance. Essential organic nutrients and their role in animal well-being.

VPHY 5115. Physiological Basis of Clinical Disease and Therapy. 1 hour.

Oasis Title: CLIN DIS & THERAPY.

Prerequisite: VPHY 5120. Elective vet school course.

The basic principles of the impact of disease on the major organ systems of the body using an integration of biochemical and physiological approaches.

VPHY 5120/7120. Cardiovascular Physiology. 0.8 hour.

Oasis Title: CARDIOVAS PHYSIOL.

Undergraduate prerequisite: First year veterinary student.

The physiological properties of the cells and organs of the cardiovascular system.

VPHY 5130. Respiratory Physiology. 0.6 hour.

Oasis Title: RESP PHYSIOL.

Prerequisite: First year veterinary student.

The mammalian respiratory system, including transport of blood gases, pulmonary ventilation, and control of respiration.

VPHY 5140. Gastrointestinal Physiology. 0.6 hour.

Oasis Title: GI PHYSIOL.

Prerequisite: First year veterinary student.

The mammalian digestive system of domestic animals.

VPHY 5150/7150. Endocrinology and Reproduction. 2.3 hours.

Oasis Title: ENDO & REPRO.

Undergraduate prerequisite: First year veterinary student.

Basic animal endocrinology and reproduction.

VPHY 5160. Renal and Body Fluid Physiology. 1.3 hours.

Oasis Title: RENAL FLUID PHYSIOL.

Prerequisite: Permission of department. First year veterinary student.

Water, electrolyte, acid-base metabolism, and renal functions of the mammal, with emphasis on basic information and its application to clinical veterinary medicine.

VPHY 5170. Basic Comparative Animal Nutrition. 1.6 hours.

Oasis Title: BASIC COMP ANIM NUT.

Prerequisite: First-year veterinary curriculum.

Basic nutrition of small (dogs and cats) and large (cattle, horse, small ruminants, and swine) animals will be presented. Emphasis will be on lifestage nutrition of healthy animals, as well as nutritional support during pregnancy and lactation, and selected nutritional deficiencies and excesses.

(VPHY)VARB 5190. Veterinary Neuroanatomy and Neurophysiology. 2.6 hours.

Oasis Title: VET NEUROANAT/PHYSI.

Prerequisite: First year veterinary student.

The gross and microscopic anatomy and physiology of the nervous system with correlation to clinical disorders.

VPHY 5200/7200. Principles of Pharmacology. 3.1 hours.

Oasis Title: PRINC OF PHARMACO.

Undergraduate prerequisite: Permission of department. Second year veterinary student.

Principles of pharmacology and review of drug classes.

VPHY 5210. Clinical Therapeutics. 1 hour.

Oasis Title: CLIN THERAPEUTICS.

Prerequisite: VPHY 5200/7200. Vet school elective.

The science and the art of case management using interactive discussions of clinical cases at the UGA CVM Teaching Hospital. Cases selected to discuss the fine points of therapy for disorders

of the following organs: cardiovascular, respiratory, gastrointestinal, renal, urinary, dermatologic, endocrine; as well as cancer therapy, pain management, anti-inflammatory therapy, and antimicrobial therapy.

VPHY 5215. Introduction to Veterinary Botanical Medicine. 1 hour.

Oasis Title: INTRO VET BOT MED.

Prerequisite or corequisite: VPHY 5200/7200. Vet school elective.

This course is designed to introduce the vet professional student to the practice and rationale for use of herbal medicine.

spring semester every year.

VPHY(SAMS) 5216. Problem-Based Pathophysiology: A Mechanistic Approach to Understanding Disease. 2 hours.

Oasis Title: PROB BAS PATHOPHYSI. Vet school elective.

Utilization of a case-based approach to the application of physiology and biochemical principles to clinical problems. Students will develop the ability to take a mechanistic approach to the understanding of clinical disease and therapy. Format will employ problem-based learning principles with students organized in discussion groups.

VPHY 5220. Veterinary Toxicology. 1.2 hours.

Oasis Title: VET TOXICOLOGY.

Prerequisite: Permission of department. Second year veterinary student.

Poisons important in veterinary medicine, including their action on living organisms, their detection, identification, and mechanism of action.

VPHY 5221. Principles of Small Animal Toxicology. 0.5 hour.

Oasis Title: SMALL ANIMAL TOXICO.

Prerequisite: VPHY 5220. Vet school elective.

Small animal poisons, clinical signs and treatment including both didactic lecture and case discussions.

VPHY 5222. Principles of Large Animal Toxicology. 0.5 hour.

Oasis Title: LARGE ANIMAL TOXICO.

Prerequisite: VPHY 5220. Vet school elective.

Production animal and equine poisons, clinical signs and treatments including didactic lectures and case discussions.

VPHY 5310. Clinical Therapeutics II. 1 hour.

Oasis Title: CLIN THERAPEUTIC II.

Prerequisite: VPHY 5200/7200. Vet school elective.

The science and art of case management using interactive discussions of clinical cases at UGA CVM Teaching Hospital for third-year veterinary students. Cases selected to include disorders of cardiovascular, respiratory, gastrointestinal, renal, urinary, dermatologic, endocrine; as well as cancer therapy, pain management, anti-inflammatory and antimicrobial therapy.

VPHY 5316. Advanced Problem-Based Medical Pathophysiology. 2 hours.

Oasis Title: ADV MED PATHOPHYS.

Prerequisite: VPHY(SAMS) 5216. Vet school elective.

Focuses on understanding physiological and pathophysiological problems in veterinary medicine. Students will review material regularly with the instructor and serve as group discussion leaders for an introductory course in pathophysiology utilizing a small-group,

problem-based approach.

VPHY 5445. Advanced Small Animal Nutrition. 2.6 hours.

Oasis Title: ADV SM ANIM NUTRITI. Vet school elective.

Specific problems in small animal nutrition for Senior Veterinary Students, Interns, and Residents.

VPHY 5900. Studies in Clinical Physiology and Pharmacology. 2-8 hours.

Oasis Title: CLIN PHYS & PHARM.

Prerequisite: Permission of department. Vet school elective.

Intensive and in-depth studies into specially designated areas of physiology and/or pharmacology.

VPHY 6090. Comparative Mammalian Physiology. 3 hours.

Oasis Title: MAMMALIAN PHYSIOL. Graduate course.

The animal body as a single functioning organism, including neurophysiology, cardiovascular and respiratory physiology.

VPHY 6100. Comparative Mammalian Physiology. 3 hours.

Oasis Title: MAMMALIAN PHYSIOL. Graduate course.

The animal body as a single functioning organism, including endocrinology, reproduction, renal, and alimentary physiology.

(VPHY)PHRM 6910. Introductory Toxicology. 3 hours.

Oasis Title: INTRODUCTORY TOX. Toxicology program.

Basic toxicology principles, including dose-response relationships, principles of toxicity and safety evaluation, pharmacokinetics and metabolism of chemicals, basic mechanisms of cellular injury, factors influencing toxicity, carcinogenesis/mutagenesis, governmental regulations, and exposure and risk assessment.

VPHY 6930. Research Methods. 1-3 hours.

Oasis Title: RSRCH METHODS. Graduate course.

One to three laboratory rotations in the Department of Physiology and Pharmacology.

VPHY 7000. Master's Research/Physiology. 1-10 hours.

Oasis Title: MASTER 'S RESEARCH.

Prerequisite: Permission of department. Graduate course.

Research while enrolled for a master's degree under the direction of faculty members.

VPHY 7010. Master's Research/Pharmacology. 1-10 hours.

Oasis Title: MASTER'S RSCH PHARM.

Prerequisite: Permission of department. Graduate course.

Research while enrolled for a master's degree under the direction of faculty members.

VPHY 7020. Master's Research/Pharmacology and Toxicology Emphasis. 1-10 hours.

Oasis Title: MAST RSCH TOXICOL. Graduate course.

Research while enrolled for a master's degree under the direction of faculty members.

VPHY 7300. Master's Thesis. 1-10 hours.

Oasis Title: MASTER'S THESIS. Graduate course.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor.

VPHY 8000. Cardiovascular Physiology. 2 hours.

Oasis Title: CARDIOVAS PHYSIOL.

Prerequisite: VPHY 6090. Graduate course.

Advanced study of current concepts in cardiovascular physiology.

VPHY 8010. Mammalian Cell Physiology. 3 hours.

Oasis Title: MAM CELL PHYSIOLOGY.

Prerequisite: Permission of department. Graduate course.

The physiology of the mammalian cell.

VPHY 8100. Comparative Medical Endocrinology. 2 hours.

Oasis Title: COMP MED ENDOCRIN.

Prerequisite: VPHY 6100. Graduate course.

Advanced study of current concepts in mammalian endocrinology.

VPHY 8120. The Molecular Basis of Renal Physiology. 2 hours.

Oasis Title: RENAL PHYSIOLOGY. Graduate course.

Prerequisite: VPHY 6100 or permission of department.

Current concepts in fluid-electrolyte physiology and renal function.

VPHY 8200. Animal Molecular Biology: Concepts and Current Literature. 2 hours.

Oasis Title: ANIM MOLEC BIOL LIT. Graduate course.

Lectures and discussion on current research topics in molecular biology pertaining to veterinary medicine and livestock production.

VPHY 8400. Neurophysiology. 3 hours.

Oasis Title: NEUROPHYSIOLOGY. Graduate course.

The nervous system stressing cellular physiology of the nervous system and how changes in cellular physiology impact behavior.

VPHY 8450. Advanced Clinical Pharmacology. 2 hours.

Oasis Title: ADVAN CLIN PHARMA. Graduate course.

Presentation and discussion of current knowledge of chemotherapeutic agents and their clinical evaluation.

VPHY 8460. Molecular Pharmacology. 3 hours.

Oasis Title: MOLEC PHARMACOLOGY.

Prerequisite: VPHY 5200/7200 or PHRM 6410. Graduate course.

The interaction of drugs with tissue receptors, and the absorption, distribution, metabolism, and elimination of drugs by the organism, and molecular carcinogenesis.

VPHY 8900. Physiology-Pharmacology Seminar. 1 hour.

Oasis Title: PHYSIOL-PHARM SEM. Graduate course.

Current research findings and methodology in physiology, pharmacology, or toxicology.

(VPHY)PHRM 8910. Organ Systems Toxicology I. 3 hours.

Oasis Title: ORGAN SYSTEMS TOX I. Toxicology program.

Prerequisite: PHRM(VPHY) 6910 or permission of department.

Mechanisms of injury of biological systems produced by chemical exposure. Adverse effects of chemicals on major bodily organs and organ systems including the blood, respiratory systems, nervous system, kidneys and the cardiovascular system.

(VPHY)PHRM(POUL) 8920. Organ Systems Toxicology II. 3 hours.

Oasis Title: ORGAN SYS TOX II. Toxicology program.

Prerequisite: PHRM(VPHY) 6910 or permission of department.

Mechanisms of injury of biological systems produced by chemical exposure. Adverse effects of chemicals on major bodily organs and organ systems including the liver, carcinogenesis/mutagenesis, immune system, reproductive system, skin, and eyes.

(VPHY)(EHSC)PHRM(POUL) 8930. Chemical Toxicology. 3 hours.

Oasis Title: CHEMICAL TOXICOLOGY. Toxicology program.

Prerequisite: PHRM(VPHY) 6910 or permission of department.

Chemical contamination of air, water, and food by major agricultural and industrial chemicals. Emphasis will be placed on sources of contamination, fate of chemicals in the environment, target species, health effects, chemical analyses, and contamination control.

(VPHY)PHRM 8940. Organ Systems Toxicology. 4 hours.

Oasis Title: ORGAN SYSTEMS TOX. Toxicology program.

Prerequisite: PHRM(VPHY) 6910 or permission of department.

Mechanisms of injury of biological systems produced by chemical exposure. Adverse effects of chemicals on major bodily organs and organ systems, including the blood, respiratory system, nervous system, kidneys, cardiovascular system, liver, immune system, reproductive system, skin, and eyes.

VPHY 9000. Doctoral Research Physiology. 1-10 hours.

Oasis Title: DOCTORAL RESEARCH. Graduate course.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members.

VPHY 9005. Doctoral Graduate Student Seminar. 3 hours.

Oasis Title: DOC GRAD STU SEM. Graduate course.

Advanced supervised experience in an applied setting. This course may not be used to satisfy a student's approved program of study.

VPHY 9010. Doctoral Research in Pharmacology. 1-10 hours.

Oasis Title: DOCT RSCH PHARMACOL. Graduate course.

Research while enrolled for a doctoral degree under the direction of faculty members.

VPHY 9020. Doctoral Research Toxicology. 1-10 hours.

Oasis Title: DOCT RSCH TOXICOL. Graduate course.

Research while enrolled for a doctoral degree under the direction of faculty members.

VPHY 9300. Doctoral Dissertation. 1-10 hours.

Oasis Title: DOCT DISSERTATION.

Prerequisite: Permission of department. Graduate course.

Dissertation writing under the direction of the major professor.

Infectious Diseases (IDIS)

IDIS(CBIO) 3100. People, Parasites, and Plagues. 3 hours.

Oasis Title: PEOPLE AND PLAGUES.

Not open to students with credit in PARA 3100.

Prerequisite: (BIOL 1103 and BIOL 1103L) or BIOL 1107-1107L.

A multi-disciplinary approach to examining the impact of infectious diseases on human populations. Current persistent, epidemic, and emerging diseases and how they are identified, studied, and combatted will be discussed. Topics will also include the sociological, psychological, historical, legal, environmental, and economic implications of disease.

IDIS(CBIO) 3100H. People, Parasites, and Plagues (Honors). 3 hours.

Oasis Title: PEOPLE AND PLAGUES.

Not open to students with credit in PARA 3100H.

Prerequisite: [(BIOL 1103 and BIOL 1103L) or (BIOL 1107-1107L)] and permission of Honors.

A multi-disciplinary approach to examining the impact of infectious diseases on human populations. Current persistent, epidemic and emerging diseases and how they are identified, studied and combatted will be discussed. Topics will also include the sociological, psychological, historical, legal, environmental, and economic implications of disease.

IDIS 4220/6220. Pathogenic Bacteriology. 3 hours.

Oasis Title: PATH BACTERIOL.

Not open to students with credit in MMIB 4220/6220.

The morphological, physiological, and pathogenic mechanisms of the important pathogenic bacterial agents; their relation to health and disease.

IDIS 4390/6390-4390L/6390L. Clinical Diagnostic Microbiology. 4 hours. 3 hours lecture and 4 hours lab per week.

Oasis Title: CLIN DIAG MICROBIOL.

Not open to students with credit in MMIB 4390/6390-4390L/6390L.

Undergraduate prerequisite: IDIS 4220/6220.

The application of basic diagnostic problems associated with the recovery of disease organisms from clinical material. Methodology and problems involved in laboratory isolation and identification. Methods will also include molecular and automated applications.

(IDIS)(MIBO)POPH 4450/6450-4450L/6450L. Microbial Genetics and Genomics. 4 hours. 3 hours lecture and 2 hours lab per week.

Oasis Title: MICROBIAL GENETICS.

Not open to students with credit in MIBO 4800L/6800L or MMIB 4450/6450.

Undergraduate prerequisite: MIBO 3500.

Graduate prerequisite: MIBO 3500 or permission of department.

Molecular basis of gene regulation in microorganisms with emphasis on systems pertaining to pathogenesis, evolution, and ecology. computer lab includes examination of evolutionary relatedness, sequence comparisons, database searches and reconstruction of metabolic pathways.

IDIS 4900. Directed Research. 2-4 hours.

Oasis Title: DIRECTED RESEARCH.

Prerequisite: Permission of department.

An individualized research project under the guidance of a faculty mentor within a research laboratory on campus that conducts infectious disease research. How to conduct and document

scientific experiments. The risks and appropriate precautions to work safely within that particular laboratory environment.

IDIS 4960H Honors Research, 4 hours

Oasis Title: Honors Research

Prerequisite: Permission of department

An individualized research project under the guidance of a faculty mentor within a research laboratory on campus that conducts infectious disease research. How to conduct and document scientific experiments. The risks and appropriate precautions to work safely within that particular laboratory environment.

IDIS 4970H Honors Research, 4 hours

Oasis Title: Honors Research

Prerequisite: Permission of department

An individualized research project under the guidance of a faculty mentor within a research laboratory on campus that conducts infectious disease research. How to conduct and document scientific experiments. The risks and appropriate precautions to work safely within that particular laboratory environment

IDIS 4980H Honors Research, 4 hours

Oasis Title: Honors Research

Prerequisite: Permission of department

An individualized research project under the guidance of a faculty mentor within a research laboratory on campus that conducts infectious disease research. How to conduct and document scientific experiments. The risks and appropriate precautions to work safely within that particular laboratory environment

IDIS 4990H Honors Research, 4 hours

Oasis Title: Honors Research

Prerequisite: Permission of department

An individualized research project under the guidance of a faculty mentor within a research laboratory on campus that conducts infectious disease research. How to conduct and document scientific experiments. The risks and appropriate precautions to work safely within that particular laboratory environment

IDIS 5100. Molecular Medicine in Veterinary Practice. 1 hour.

Oasis Title: MOL MED VET PRAC.

Not open to students with credit in PARA 5100.

The theory, tools, and techniques of state-of-the-art molecular biology, relevant to both clinical practice and research. Topics will be introduced through analysis and discussion of relevant, current literature.

IDIS 5130-5130L. Veterinary Bacteriology and Mycology. 3.4 hours. 3 hours lecture and 1 hour lab per week.

Oasis Title: VET BACT AND MYCOL.

Not open to students with credit in MMIB 5130-5130L.

Prerequisite: First year veterinary student.

Basic properties of microorganisms. The pathogenic mechanisms and the diseases caused by bacteria.

IDIS 5140-5140L. Veterinary Virology. 2.2 hours. 3 hours lecture and 2 hours lab per week.

Oasis Title: VETERINARY VIROLOGY.

Not open to students with credit in MMIB 5140-5140L.

Prerequisite: First year veterinary student.

The important, clinically-relevant concepts about the basic nature of viruses, such as their biological processes, the diseases they cause in animals, and the methods of diagnosis and control of viral disease. An attempt is made to cover the more important veterinary viral diseases, and those that represent instructive examples of basic concepts in viral disease.

IDIS 5150-5150L. Veterinary Immunology. 2.5 hours.

Oasis Title: VET IMMUNOLOGY.

Not open to students with credit in MMIB 5150-5150L.

Prerequisite: First year veterinary student and IDIS 5140-5140L.

Basic defense mechanisms against infectious diseases; serological tests in disease diagnosis; and clinical considerations of immunization programs, immune deficiencies, and autoimmune diseases.

IDIS 5200-5200L. Veterinary Parasitology. 3.7 hours. 3-4 hours lecture and 2-4 hours lab per week.

Oasis Title: VET PARASIT.

Not open to students with credit in PARA 5200-5200L.

Prerequisite: Permission of department.

Parasitic helminths, protozoa, and arthropods are studied on the basis of taxonomy, morphology, life cycle, and pathological manifestations. A brief comprehensive overview of parasite diagnosis, treatment, and control is also provided.

IDIS 5210-5210L. Veterinary Parasitology II. 3 hours. 4 hours lecture and 1-2 hours lab per week.

Oasis Title: VET PARASIT II.

Not open to students with credit in PARA 5210-5210L.

Prerequisite: Permission of department.

Parasitic protozoa and arthropods are studied on the basis of taxonomy, morphology, life cycle, pathological manifestations, diagnosis, treatment, prevention, and control.

IDIS 5215/7215-5215L/7215L. Large Animal Parasitology. 1.3 hours.

Oasis Title: LA PARASITOLOGY.

Not open to students with credit in PARA 5215-5215L.

Graduate prerequisite: Permission of department.

Biology, epidemiology, and control of clinically important parasites of ruminants, horses, and swine. Emphasis is placed on clinical and diagnostic issues relating to host-parasite interactions and the development of parasite control programs. Laboratory portion will emphasize diagnostic methods, interpretation of laboratory results, and problem solving.

IDIS 5220-5220L. Small Animal Advanced Parasitology. 1 hour. 10 hours lecture and 10 hours lab per week.

Oasis Title: SA PARASITOLOGY.

Not open to students with credit in PARA 5220-5220L.

Prerequisite: IDIS 5200-5200L.

Biology, epidemiology, and control of clinically important parasites of dogs, cats, and other popular pet species. Emphasis is placed on clinical, diagnostic, and treatment issues relating to host-parasite interactions and the use of strategic parasite control programs. Laboratory portion

will emphasize diagnostic methods, interpretation of results, and problem solving.

IDIS 5400. Studies in Advanced Clinical Parasitology. 1.3-3.9 hours.

Oasis Title: CLINICAL PARASIT.

Not open to students with credit in PARA 5400.

Prerequisite: IDIS 5200-5200L.

A clinical rotation for veterinary students who wish to hone their clinical parasitology skills. The topical focus of each rotation is tailored to the enrolled student's career objectives and may focus on issues important in the understanding of parasites of small animals, exotics, and/or large animals.

IDIS 5900. Studies in Advanced Clinical Parasitology. 0.7-8 hours.

Oasis Title: CLINICAL PARASIT.

Not open to students with credit in PARA 5900.

Intensive and in-depth studies into specially designated areas of clinical parasitology.

IDIS 5901. Wildlife Population Health. 1.3-5.2 hours.

Oasis Title: WILDLIFE HEALTH.

Not open to students with credit in MMIB 5900.

Prerequisite: Permission of department.

The block exposes students to many aspects of wildlife population medicine. Objectives are to acquaint the student with major wildlife diseases and with the interactions between wildlife management and wildlife health. Treatment of exotic animals or individual wild animals for illness or injury is not an aspect of this externship.

IDIS 7000. Master's Research. 1-15 hours.

Oasis Title: MASTER'S RESEARCH.

Not open to students with credit in MMIB 7000.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members.

IDIS 7300. Master's Thesis. 1-15 hours.

Oasis Title: MASTER'S THESIS.

Not open to students with credit in MMIB 7300.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor.

IDIS 8030. Helminthology. 3 hours. 1 hour lecture and 8 hours lab per week.

Oasis Title: HELMINTHOLOGY.

Not open to students with credit in PARA 8030.

Prerequisite: Permission of department.

The morphology, life histories, classification, and parasitic relationship of the helminths. Emphasis is placed on recent advances in helminthology research.

IDIS 8050. Problems in Parasitology. 1-4 hours.

Oasis Title: PARASIT PROBLEMS.

Not open to students with credit in PARA 8050.

Prerequisite: Permission of department.

Parasitic diseases of birds and mammals. Nature of the studies determined by the student's major field of interest.

IDIS 8080L. Advanced Molecular Techniques. 3 hours. 6 hours lab per week.

Oasis Title: ADV MOLECULAR TECH.

Not open to students with credit in PARA 8080L.

Current techniques in molecular analysis of pathogens. Emphasis is placed on bioinformatics and procedures for genomic analysis, rapid isolation and characterization of parasite molecules, and the detection and identification of parasites in host vector.

(IDIS)VPAT 8150. Virology and Viral Pathogenesis. 3 hours.

Oasis Title: VIRA PATH.

Not open to students with credit in MMIB 8150.

Prerequisite: Permission of department.

Introductory virology includes viral structure, replication, genetics, and immunity. The mechanism(s) by which viruses enter, spread, and cause diseases in humans and animals. Virus-cell interactions include structural and functional alterations of hosts after virus infection and viral components responsible for these alterations.

IDIS 8160. Seminar in Infectious Diseases. 1 hour.

Oasis Title: IDIS SEMINAR.

Not open to students with credit in MMIB 8160.

Prerequisite: Permission of department.

Semi-formal meetings for discussion of research and new developments in the field. Attendance is required of all Infectious Diseases graduate students.

(IDIS)(MIBO)POPH 8200. Experimental Design in Molecular Microbiology. 5 hours.

Oasis Title: EXP DESIGN MOL MICR.

Not open to students with credit in MMIB 8200.

Prerequisite: IDIS 4220/6220 and BCMB 4020/6020.

Molecular techniques to study viruses of veterinary importance.

IDIS 8210. Experimental Procedures in Microbial Pathogenesis. 4 hours. 2 hours lecture and 6 hours lab per week.

Oasis Title: EXP PROC MICRO PATH.

Not open to students with credit in MMIB 8210.

Prerequisite: BCMB 8020 or permission of department.

Experimental procedures for the study of microbial virulence mechanisms. Basic laboratory techniques involved in the identification, isolation, and characterization of molecular factors responsible for microbial survival and virulence within a host.

IDIS 8250. Special Topics in Parasitology. 1 hour.

Oasis Title: SPEC TOPICS PAR.

Not open to students with credit in PARA 8250.

Published research and new developments in the study of parasites, their hosts and vectors.

(IDIS)(BHSI)MIBO(PBHL) 8260. Global Perspectives on Tropical and Emerging Infectious Diseases. 1 hour.

Oasis Title: GLOBAL INF DIS.

Global status, epidemiology and control of parasitic, viral, and bacterial diseases of major public health importance. Emphasis will be on the scientific, policy, and economic aspects of past, current, and future public health approaches to deal with these globally challenging infectious diseases from multiple and integrative perspectives.

IDIS 8300. Advanced Immunology II. 3 hours.

Oasis Title: AD IMMUN II.

Not open to students with credit in MMIB 8300.

Prerequisite: Permission of department.

Molecular immunology of signal transduction; T-cell, B-cell and NK cell regulation by MHC class I and II antigens; mechanisms of apoptosis; peptide processing and presentation. Lectures presented from recent research literature.

IDIS 8350. Principles and Research Applications of Flow Cytometry. 3 hours. 6 hours lab per week.

Oasis Title: FLOW CYTOMETRY.

Not open to students with credit in MMIB 8350.

Prerequisite: Permission of department.

Theory and research applications of flow cytometry. Flow cytometry as it relates to immunophenotyping, cell cycle analysis, determination of cellular pathology of apoptosis as well as simultaneous four color analysis will be covered. Students will become independent regarding instrumentation, collection of data, analysis, etc. Additionally, students will be expected to carry out independent laboratory projects as well as participate in laboratory assignments.

IDIS 8500. Animal Virology. 3 hours.

Oasis Title: ANIMAL VIROLOGY.

Not open to students with credit in MMIB 8500.

Prerequisite: IDIS 4500/6500-4500L/6500L.

Virus/cell interactions, with emphasis on molecular and genetic aspects of disease or tumor production by animal viruses. The use of molecular techniques in the diagnosis, epidemiology, and pathogenesis of viral diseases will be addressed using current literature as the basis for discussion.

IDIS 8550. Special Topics in Immunology. 1 hour.

Oasis Title: SPEC TOPICS IMMUNO.

Not open to students with credit in MMIB 8550.

Prerequisite: Permission of department.

Presentation and discussion of published research and new developments in immunology. Students will sign up to present a published article relevant in immunology.

IDIS 8590. Special Topics on Diseases Intervention. 1 hour.

Oasis Title: SPEC TOPICS DIS INT.

Prerequisite: Permission of department.

Presentation and discussion of novel research papers on disease intervention strategies. Students will present topics of study on infectious disease immunology for discussion and interpretation.

IDIS 8591. Advanced Concepts of Virology. 3 hours.

Oasis Title: CONCEPTS OF VIROL.

Areas of lecture include: 1) unifying principles of the science of virus; 2) molecular biology of viral genomes and viral structures; 3) mechanisms of attachment, entry, and genome replication; 4) transcription and replication strategies; 5) dissemination, virulence, and epidemiology; 6) virus-host interactions; 7) transformation and oncogenesis; and 8) virus control and evolution.

IDIS 8900. Problems in Infectious Diseases. 1-10 hours.

Oasis Title: ID PROBLEMS.

Not open to students with credit in MMIB 8900.

Prerequisite: Permission of department.
Intensive study, under the direction of staff members, on approved problems in medical microbiology.

IDIS 9000. Doctoral Research. 1-15 hours.

Oasis Title: DOCTORAL RESEARCH.

Not open to students with credit in MMIB 9000.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members.

IDIS 9300. Doctoral Dissertation. 1-15 hours.

Oasis Title: DOCT DISSERTATION.

Not open to students with credit in MMIB 9300.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor.

Veterinary Medicine (VETM)

VETM 4960H. Directed Readings and/or Projects (Honors). 3-5 hours.

Oasis Title: DIRECTED READINGS.

Prerequisite: BCMB(BIOL)(CHEM) 3100 and permission of department and permission of Honors.

A directed study in one of the basic sciences in the College of Veterinary Medicine. Includes library and laboratory learning experiences not otherwise available to undergraduate students.

VETM 4970H. Directed Readings and/or Projects (Honors). 3-5 hours.

Oasis Title: DIRECTED READINGS.

Prerequisite: Permission of department and permission of Honors.

A directed study in one of the basic sciences in the College of Veterinary Medicine. Includes library and laboratory learning experiences not otherwise available to undergraduate students.

VETM 4990H. Honors Thesis. 3.3 hours.

Oasis Title: HONORS THESIS.

Prerequisite: Permission of Honors.

Guidance by a faculty member in writing an honors thesis.

VETM 5100. Veterinary Ethics and Jurisprudence. 0.6 hour.

Oasis Title: VET ETHICS/JURIS.

Prerequisite: Permission of department.

Veterinary medical ethics and the basic laws and regulations governing veterinary medicine are presented.

VETM 5110. Veterinary Medicine: An Umbrella of Opportunities. 1 hour.

Oasis Title: VETMEDOPPORTUNITIES.

Not open to students with credit in VETM 5200.

Prerequisite: Must be a DVM student.

Consists of 16 one-hour seminars on career opportunities in veterinary medicine. A speaker will be invited for each session to give students an overview of his/her specialty area.

VETM 5120. The Science of Veterinary Medicine. 0.5 hour.

Oasis Title: SCIENCE OF VET MED.

Prerequisite: Permission of school.

Introduction to the range of career paths in veterinary medicine with a perspective that integrates medicine with basic science.

VETM 5201. International Veterinary Medicine. 1 hour.

Oasis Title: INTERNAT VET MED.

Prerequisite: Permission of school.

Students will be exposed through lectures, interactive computer modules, and discussion sessions to various facets of veterinary medicine as it is accomplished globally. Emphasis will be placed on emerging opportunities and preparing to meet those new challenges for the profession.

VETM 5300. Veterinary Practice Management. 1.6 hours.

Oasis Title: VET PRAC MGMT.

Prerequisite: Permission of department.

The business aspects of veterinary practice management.

VETM 5600. Veterinary Externship I. 0.7-8 hours.

Oasis Title: EXTERNSHIP.

Prerequisite: Permission of department.

Application of clinical medicine and surgery in private practice. Externship cannot exceed twelve weeks of contact time.

VETM 5610. Clinical Medicine. 0.7-7.8 hours.

Oasis Title: CLIN MED.

Prerequisite: Permission of department.

Application of the art and science of veterinary medicine in a clinical situation.

VETM 5620. Veterinary Externship II. 0.7-8 hours.

Oasis Title: VET EXTERN II.

Prerequisite: Permission of department.

Clinical medicine and surgery in private practice. Externship cannot exceed twelve weeks of contact time.

VETM 7000. Master's Research. 1-12 hours.

Oasis Title: MASTER'S RESEARCH.

Research while enrolled for a master's degree under the direction of major professor in consultation with advisory committee.

VETM 7100. Veterinary Ethics and Jurisprudence. 0.7 hour.

Oasis Title: VET ETHICS/JURIS.

Veterinary medical ethics and the basic laws and regulations governing veterinary medicine.

VETM 7300. Master's Thesis. 1-10 hours.

Oasis Title: MASTER'S THESIS.

Thesis writing under the direction of the major professor and with consultation with advisory committee.

Anatomy and Radiology (VARB)

VARB 5105-5105L. Clinical Anatomy of Large Animals. 1 hour. 2 hours lecture and 2 hours lab per week.

Oasis Title: CLIN ANAT OF LA.

Prerequisite: VARB 5150 and VARB 5120.

This course provides an opportunity for students to review and apply anatomical principles and facts, with a clinical perspective, to the diagnosis of diseases and approaches for surgical intervention. Species studied will be the horse and ox. Review of the topography of normal animals as they relate to physical diagnosis will be studied.

VARB 5120. Laboratory on Comparative Anatomy of the Horse and Food Animals. 4.6 hours.

Oasis Title: LAB ANAT HORSE/FOOD.

Prerequisite: VARB 5150.

Dissection based course using the horse and food animals in a comparative manner. The horse, ox, and goat will be dissected in relative detail with comparisons to the pig. Emphasis will be on the anatomy necessary for clinical diagnosis and surgical intervention.

VARB 5150. Principles of Veterinary Anatomy and Embryology. 4.5 hours.

Oasis Title: VET ANATOMY & EMBRY.

Prerequisite: First year veterinary student.

Anatomic principles of embryology and gross structure of each system of domestic animals.

Non-traditional format: This course extends over a 12-week period. The course consists of 58 lectures and 10-2 hour labs which equals 68 contacts or 4.5 credit hours. The number of lectures and labs varies each week.

Offered fall semester every year.

VARB 5170. Veterinary Cell Biology. 1 hour.

Oasis Title: CELL BIOLOGY.

Prerequisite: First year veterinary student.

Structure of animal cells related to function and biochemistry.

VARB 5180-5180L. Microscopic Anatomy of Domestic Animals. 3 hours.

Oasis Title: VET MICROSCOPIC.

Prerequisite: First year veterinary student.

Normal comparative micromorphology of the tissues and organs of domestic animals.

VARB(VPHY) 5190. Veterinary Neuroanatomy and Neurophysiology. 2.6 hours.

Oasis Title: VET NEUROANAT/PHYSI.

Prerequisite: First year veterinary student.

The gross and microscopic anatomy and physiology of the nervous system with correlation to clinical disorders.

VARB 5200/7200. Equine Behavior. 1 hour.

Oasis Title: EQUINE BEHAVIOR.

Undergraduate prerequisite: VARB 5240.

Normal behavior, including communication, social organization, sexual, parental, developmental, maintenance, and learning in horses will be studied in depth. Differential diagnosis and treatment of behavior problems, including surgery, pharmacological treatment,

environmental management, and behavior modification of horses will be covered.

VARB 5212/7212. Behavior Problems in Cats. 0.5 hour.

Oasis Title: BEHAVIOR PROB CATS.

Undergraduate prerequisite or corequisite: VARB 5240.

Prevention, diagnosis, and treatment of behavior problems in cats. Topics include aggression, undesirable elimination behavior, fears and phobias, cognitive dysfunction, compulsive disorder and destructiveness. Students will be presented with cases to discuss that will facilitate their learning how to apply the information.

VARB 5214/7214-5214L/7214L. Behavior Problems in Dogs. 1 hour.

Oasis Title: BEHAVIOR PROB DOGS.

Undergraduate prerequisite or corequisite: VARB 5240.

Prevention, diagnosis, and treatment of behavior problems in dogs. Specific topics include aggression and related ethical and legal issues; undesirable elimination behavior; fears and phobias, including stormphobia, separation anxiety, and noise phobias; cognitive dysfunction; compulsive disorder; and humane dog training techniques.

VARB 5220. Studies in Applied and Domestic Animal Behavior. 0.7-3.3 hours.

Oasis Title: ANIMAL BEHAVIOR.

Prerequisite: Permission of department.

Review recent research and/or a recent book on the development of theory in animal behavior and its practical applications.

VARB 5240. Veterinary Animal Behavior. 1.2 hours.

Oasis Title: VET ANIM BEHAVIOR.

Not open to students with credit in VARB 5140.

Prerequisite: Permission of department.

Principles of veterinary behavior.

VARB 5310. Veterinary Radiology. 3.5 hours.

Oasis Title: VET RADIOLOGY.

Prerequisite: Must be a third year student in the DVM curriculum.

The principles of radiology common to both small animal and large animal practice as well as proper radiation safety techniques. The course also includes radiographic principles pertinent to the diagnosis of disease in small animals and horses.

VARB 5450. Clinical Animal Behavior. 3.9-7.8 hours.

Oasis Title: CLIN ANIMAL BEHAV.

Prerequisite: VARB 5240 or permission of department.

Students will observe and participate in the diagnosis and treatment of animal behavior problems and review literature relevant to the cases they are seeing.

VARB 5480. Clinical Radiology. 3.9 hours.

Oasis Title: CLIN RADIOLOGY.

The production and recognition of diagnostic quality radiographs of both small and large animals as well as radiographic interpretation.

VARB 5481. Small Animal Ultrasound Elective. 2.6 hours.

Oasis Title: SA ULTRASOUND.

This course is a clinical elective in small animal ultrasound, combining group discussion, self

study, and "hands-on" sonographic evaluation of VMTH patients.

VARB 5901. Studies in Clinical Anatomy, Radiology, and Animal Behavior. 1.3-7.8 hours.

Repeatable for maximum 15.6 hours credit.

Oasis Title: CLIN ANAT RAD & BEH.

Studies involving different areas of anatomy, radiology, and animal behavior.

VARB 6070. Neuroanatomy of Domestic Animals. 1.3 hours.

Oasis Title: NEUROANATOMY.

Prerequisite: Permission of department.

The gross, microscopic, and ultrastructural aspects of neuroanatomy presented from a comparative viewpoint, using the dog as the basic animal. Open to qualified graduate or undergraduate students in the biological sciences.

VARB 7000. Master's Research. 3-9 hours.

Oasis Title: MASTER'S RESEARCH.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members.

VARB 7110. Practicum in Teaching Gross Anatomy. 4 hours.

Oasis Title: PRACTICUM ANATOMY.

Prerequisite: VARB 5120 or VARB 7120 or VARB 7130 or VARB 7160 or permission of department.

The preparation and presentation of lectures and laboratory instruction on the gross anatomy of the dog and cat. Various methods of presentation of subject matter and student evaluation.

VARB 7120. Laboratory in Anatomy of the Horse. 3.7 hours.

Oasis Title: ANATOMY OF HORSE.

Prerequisite: Permission of department.

Gross anatomy of the horse correlated with palpation of the live animal and radiographic anatomy with comparison to the dog, cat, and food animals. Emphasis is on the anatomy necessary to understand surgical procedures and clinical diagnosis.

VARB 7130. Laboratory in Anatomy of Food Animals. 3.7 hours.

Oasis Title: FOOD ANIMALS.

Prerequisite: Permission of department.

Gross anatomy of food animals, mainly by dissection, correlated with palpation of the live animal and radiographic anatomy with comparison made to the dog, cat, and horse. Emphasis is on the anatomy necessary to understand surgical procedures and clinical diagnosis.

VARB 7140. Veterinary Animal Behavior. 1.3 hours.

Oasis Title: VET ANIMAL BEHAVIOR.

Prerequisite: Permission of department.

Diagnosis of treatment of common animal behavior problems.

VARB 7150. Principles of Veterinary Anatomy. 4 hours. 3 hours lecture and 2 hours lab per week.

Oasis Title: PRINCIPLES VET ANAT.

Prerequisite: Permission of department.

Anatomic principles of each system of domestic animals.

VARB 7160. Laboratory in Anatomy of the Dog and Cat. 3.7 hours.

Oasis Title: ANAT DOG AND CAT.

Prerequisite: VARB 5150 or VARB 7150.

Gross anatomy of the dog and cat correlated with palpation of the live animal and radiographic anatomy with comparison to the horse and food animals. Emphasis is on the anatomy necessary to understand surgical procedures and clinical diagnosis.

VARB 7180-7180L. Comparative Microscopic Anatomy of Domestic Animals. 3 hours.

Oasis Title: COMP MICRO ANATOMY.

Prerequisite: Permission of department.

Graduate student will review and discuss normal comparative micromorphology of the tissues and organs of domestic animals.

VARB 7300. Master's Thesis. 1-10 hours.

Oasis Title: MASTER'S THESIS.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor.

VARB 7340. Clinical Problems of Animal Behavior. 1-5 hours.

Oasis Title: ANIMAL BEHAVIOR.

Prerequisite: Permission of department.

The diagnosis and treatment of animals with behavior problems. Review of literature on current cases.

VARB 7610. Radiology Resident I. 6-18 hours.

Oasis Title: RESIDENT I.

Introduction to radiographic technique, radiographic anatomy, and interpretation of radiographic images. Introduction to ultrasonographic and nuclear scientific diagnostic images. Introduction to radiation oncology concepts and clinical research methodology. Development of teaching techniques to be used in didactic and clinical teaching.

VARB 7620. Radiology Resident II. 6-18 hours.

Oasis Title: RESIDENT II.

Continued and increased exposure to techniques in diagnostic radiography, ultrasonography, nuclear medicine, radiation oncology, computerized tomography, magnetic resonance imaging, and interventional radiography. Design of a clinical research project. Participation in didactic student teaching.

VARB 7630. Radiology Resident III. 6-18 hours.

Oasis Title: RESIDENT III.

Advanced techniques in diagnostic imaging, therapeutic radiology, 3D imaging (CT, MRT).

Provide primary teaching of didactic and clinical topics to veterinary students. Provide primary radiographic expertise to the CVM, including diagnostic imaging and radiation therapy.

Complete clinical research project.

VARB 7710. Behavior Resident I. 6-18 hours.

Oasis Title: BEHAVIOR RESIDENT I.

Introduction to diagnosis of behavior problems in companion animals. Introduction to management of behavior problems, basic and applied psychopharmacology, and use of behavior modification techniques in the treatment of behavior problems. Development of teaching

techniques to be used in didactic and clinical teaching.

VARB 7720. Behavior Resident II. 6-18 hours.

Oasis Title: BEH RESIDENT II.

Prerequisite: VARB 7710.

Continued and increased exposure to the diagnosis of behavior problems in companion animals, management of behavior problems, basic and applied psychopharmacology and use of behavior modification techniques in the treatment of behavior problems. Development of teaching techniques to be used in didactic and clinical teaching.

VARB 7730. Behavior Resident III. 6-18 hours.

Oasis Title: BEH RESIDENT III.

Prerequisite: VARB 7720.

Advanced study in the diagnosis of behavior problems in companion animals, management of behavior problems, basic and applied psychopharmacology and use of behavior modification techniques in the treatment of behavior problems. Participate in didactic and clinical teaching of senior veterinary students. Complete clinical research project.

VARB 8010. Problems in Veterinary Anatomy. 1-5 hours.

Oasis Title: VET ANATOMY.

Designed to allow graduate students the opportunity to explore, under supervision, anatomical problems of their choice. These may be in areas of gross or microscopic anatomy. Open to graduate students in the biological sciences meeting the course prerequisites.

VARB 8030. Advanced Veterinary Histology. 3 hours. 2 hours lecture and 2 hours lab per week.

Oasis Title: ADV VET HISTOLOGY.

Prerequisite: Permission of department.

Histological variations in the structure of organ systems of domestic animals. Functional aspects based on comparative morphology will be stressed. Open to all qualified graduate students in any area of the biological sciences.

VARB 8050. Special Radiographic Procedures. 3 hours.

Oasis Title: RAD PROCEDURES.

Prerequisite: VARB 5310.

The methods and interpretation of special radiographic procedures. These findings are correlated with survey radiography.

VARB 8100. Fine Structure of Animal Tissues. 4 hours.

Oasis Title: FINE STRUCTURE.

Prerequisite: CBIO 4000/6000-4000L/6000L and permission of department.

The electron microscope and related techniques to the understanding of tissue fine structure. Emphasis will be placed on giving the student a basis for interpretation of electron micrographs in a variety of animal tissues. Cellular and intracellular morphologic specializations will be related to the function of the tissue or organ.

VARB 8340. Seminar in Applied and Domestic Animal Behavior. 1-5 hours.

Oasis Title: SEMINAR ANIM BEHAV.

Prerequisite: Permission of department.

The evaluation of research, development of theory, and practical applications of research on

animal behavior, or a recent book on the subject will be evaluated.

VARB 9340. Practicum in Clinical Animal Behavior. 1-10 hours. Oasis Title: ANIMAL BEHAVIOR.

Prerequisite: VARB 7340 and permission of department.

Diagnosis and treatment of animals with behavior problems. Includes pharmacologic, surgical, and behavior modification treatment techniques.

Pathology (VPAT)

(VPAT)BIOL(CBIO) 5040/7040. Electron Microscopy. 3 hours.

Oasis Title: ELECTRON MICROSCOPY.

Undergraduate prerequisite: [(CHEM 1212 and CHEM 1212L) or (CHEM 1412 and CHEM 1412L)] and PHYS 1112-1112L.

Instrument theory and theory of specimen preparation for both transmission and scanning electron microscopy. Fundamentals of X-ray microanalysis, image processing, and image analysis.

VPAT 5200-5200L. General Animal Pathology. 2.8 hours.

Oasis Title: GEN ANIMAL PATHOLOG.

Prerequisite: Permission of department.

The reactions of the body to disease processes, specifically disturbances of circulation, cell injury, inflammation and disturbances of growth. Recognizing lesions grossly and microscopically, determining the pathogenesis of the lesions, and making lesion and disease diagnosis.

VPAT(LAMS)(SAMS) 5205-5205L. Dermatology and Integumentary Pathology. 1 hour.

Oasis Title: DERM AND INTEG PATH.

Morphologic reactions of skin to disease processes. Vocabulary, lesion pathogenesis, recognition of lesion patterns, and gross lesion diagnosis.

VPAT 5215. Systemic Pathology I. 2 hours.

Oasis Title: SYSTEMIC PATH I.

Prerequisite or corequisite: VPAT 5200-5200L.

This course is designed to give students an organ-system related approach to disease processes as manifested by morphologic, physiologic, and biochemical changes.

VPAT 5220. Veterinary Forensics and Forensic Pathology. 1 hour.

Oasis Title: VET FORENSIC PATH.

Prerequisite or corequisite: VPAT 5200-5200L.

Animal cruelty and forensic investigations from both a clinical and pathologic point of view and the relationship between the clinician, pathologist, and law enforcement agencies in veterinary medicolegal death investigation.

VPAT 5250-5250L. Clinical Pathology. 3.6 hours.

Oasis Title: CLINICAL PATHOLOGY.

Prerequisite: Second year DVM student.

Hematology, clinical biochemistry, and cytology of domestic animals. Laboratory testing as an ancillary aid in disease diagnosis.

VPAT 5301. Studies in Diagnostic Pathology. 1 hour.

Oasis Title: STUDIES DIAG PATH.

Prerequisite: Must be a DVM student.

Prerequisite or corequisite: VPAT 5200-5200L.

Students will gain a deeper insight into veterinary pathology by participating in both clinical and anatomic pathology diagnostics. They will accompany and assist faculty and residents in their duties, and will be assigned specific independent tasks.

VPAT 5316. Systemic Pathology II. 2 hours.

Oasis Title: SYSTEMIC PATH II.

Prerequisite or corequisite: VPAT 5200-5200L.

This course is designed to give students an organ-system related approach to disease processes as manifested by morphologic, physiologic, and biochemical changes.

VPAT 5400. Diagnostic Pathology. 2.6 hours.

Oasis Title: DIAG PATH.

Prerequisite: Must be a fourth year veterinary student.

Divided into clinical pathology and necropsy pathology sections. The clinical pathology section emphasizes interpretation of cytologic and hematologic data. Postmortem examinations are performed on cases submitted to the Athens Diagnostic Assistance Laboratory. Integration of information provided by clinical history, morphologic lesions, and ancillary tests.

VPAT 5401. Anatomic Pathology Clerkship. 1.3-2.6 hours.

Oasis Title: ANATOMIC PATH CLERK.

Prerequisite: VPAT 5200-5200L.

Postmortem examinations are performed on cases submitted to the Athens Diagnostic Laboratory. Integration of information from clinical history, gross and microscopic lesions, and ancillary tests are used to formulate a diagnosis.

VPAT 5402. Clinical Pathology Clerkship. 1.3-2.6 hours.

Oasis Title: CLIN PATH CLERKSHIP.

Prerequisite: VPAT 5250-5250L and must be a DVM student.

Cytologic and hematologic data from the Teaching Hospital are examined, interpreted, and diagnoses are reported to clinicians.

VPAT 5900. Studies in Pathology. 0.7-12 hours.

Oasis Title: STUDIES PATHOLOGY.

Prerequisite: Permission of department.

Individual study or project in veterinary pathology.

VPAT 7000. Master's Research. 1-10 hours.

Oasis Title: MASTER'S RESEARCH.

Prerequisite: Permission of department.

Research while enrolled for a master's degree under the direction of faculty members.

VPAT 7005. Graduate Student Seminar. 3 hours.

Oasis Title: GRAD STUDENT SEM.

Advanced supervised experience in an applied setting. This course may not be used to satisfy a student's approved program of study.

VPAT 7010. Necropsy Practicum. 1-12 hours.

Oasis Title: NECROPSY PRACTICUM.

Prerequisite: Permission of department.

Necropsy diagnosis of diseases of animals via gross and microscopic examination of tissues.

VPAT 7011. Necropsy Practicum II. 1-18 hours.

Oasis Title: NECROPSY PRACT II.

Prerequisite: Permission of department.

Necropsy diagnosis of diseases of animals via gross and microscopic examination of tissues for residents in their second year.

VPAT 7012. Necropsy Practicum III. 1-18 hours.

Oasis Title: NECROPSY PRACT III.

Prerequisite: Permission of department.

Necropsy diagnosis of diseases of animals via gross and microscopic examination of tissues for residents in their third year.

VPAT 7020. Biopsy Practicum. 1-12 hours.

Oasis Title: BIOPSY PRACTICUM.

The diagnosis of diseases of animals by biopsy techniques. Studies are made of microscopic alterations of tissue submitted for antemortem diagnosis.

VPAT 7021. Biopsy Practicum II. 1-18 hours.

Oasis Title: BIOPSY PRACT II.

Prerequisite: Permission of department.

The diagnosis of diseases of animals by biopsy techniques. Studies are made of microscopic alterations of tissue submitted for antemortem diagnosis for residents in their second year.

VPAT 7022. Biopsy Practicum III. 1-18 hours.

Oasis Title: BIOPSY PRACT III.

Prerequisite: Permission of department.

The diagnosis of diseases of animals by biopsy techniques. Studies are made of microscopic alterations of tissue submitted for antemortem diagnosis for residents in their third year.

VPAT 7030. Cytology Practicum. 1-12 hours.

Oasis Title: CYTOLOGY PRACTICUM.

Prerequisite: Permission of department.

The diagnosis of diseases of animals by cytologic techniques. Studies are made of cytologic preparations prepared from fluids and tissues submitted for antemortem diagnosis.

VPAT 7031. Cytology Practicum II. 1-18 hours.

Oasis Title: CYTOLOGY PRACT II.

Prerequisite: Permission of department.

The diagnosis of diseases of animals by cytologic techniques. Studies are made of cytologic preparations prepared from fluids and tissues submitted for antemortem diagnosis for residents in their second year.

VPAT 7032. Cytology Practicum III. 1-18 hours..

Oasis Title: CYTOLOGY PRACT III.

Prerequisite: Permission of department.

The diagnosis of diseases of animals by cytologic techniques. Studies are made of cytologic

preparations prepared from fluids and tissues submitted for antemortem diagnosis for residents in their third year.

VPAT 7200-7200L. General Animal Pathology. 3.7 hours. 3 hours lecture and 1 hour lab per week.

Oasis Title: GEN ANIMAL PATHOLOG.

Prerequisite: Permission of department.

The reaction of the body to disease processes, specifically disturbances of circulation, cell injury, inflammation, and disturbances of growth. Recognizing lesions grossly and microscopically, determining the pathogenesis of the lesions, and making lesion and disease diagnoses.

VPAT 7300. Master's Thesis. 1-10 hours.

Oasis Title: MASTER'S THESIS.

Prerequisite: Permission of department.

Thesis writing under the direction of the major professor.

VPAT 8000. Pathology Rounds. 1 hour.

Oasis Title: PATH ROUNDS.

Prerequisite: Permission of department.

The presentation of complete case studies in weekly clinical pathology and histopathology rounds.

VPAT 8020. Cellular Pathology. 4 hours.

Oasis Title: CELL PATH.

Prerequisite: Permission of department.

The response of the body to disease. Fine structural and molecular changes; includes mechanisms of cellular injury, carcinogenesis, and mechanisms of neoplasia and the inflammatory process.

VPAT 8030. Tumor Biology. 3 hours.

Oasis Title: TUMOR BIOLOGY.

Prerequisite: Permission of department.

Prerequisite or corequisite: VPAT 8020.

The cellular and molecular processes involved in carcinogenesis, including but not limited to, the roles of viruses, chemicals, growth factors and suppressor genes. Involvement of cell proliferation and cell communications.

VPAT 8050. Problems in Veterinary Pathology. 2-5 hours.

Oasis Title: PROB VET PATHOLOGY.

Prerequisite: Permission of department.

Disease problems of both birds and mammals. The nature of the studies will be determined by the student's major field of interest.

VPAT 8070-8070L. Veterinary Hematology. 3 hours. 2 hours lecture and 3 hours lab per week.

Oasis Title: VET HEMATOLOGY.

The morphology, physiology and pathology of the blood and blood-forming tissues. The laboratory will emphasize the morphology of normal and abnormal blood and bone marrow of domestic animals.

VPAT 8100. Microscopic Pathology. 3 hours. 6 hours lab per week.

Oasis Title: MICROSCOPIC PATH.

Prerequisite: Permission of department.

The microscopic features of diseases of domestic animals with emphasis on writing lesion descriptions and diagnosis.

VPAT 8110. Veterinary Advanced Pathology. 3 hours. 1 hour lecture and 4 hours lab per week.

Oasis Title: VET ADVANCED PATH.

Prerequisite: Permission of department.

Prerequisite or corequisite: VPAT 8100.

This course focuses on the pathology of disease processes in veterinary medicine with emphasis on the microscopic and ultrastructural changes.

VPAT 8120. Seminars in Laboratory Clinical Biochemistry. 1-3 hours.

Oasis Title: LAB CLIN BIOCHEM.

Prerequisite: Permission of department.

Test methodology with brief reviews of related pathophysiologic mechanisms, clinical applications, and species differences. Principles of instrumentation, quality control, methodology, and interpretation of specific tests for diagnosis of animal diseases, e.g., enzymology assays, specific tests related to hepatic function and renal function, protein analysis, and endocrine related assays.

VPAT 8130. Diagnostic Oncology. 3 hours. 6 hours lab per week.

Oasis Title: DIAG ONCOLOGY.

Prerequisite: VPAT 8100 or permission of department.

The microscopic features of neoplasms of domestic animals. The identification and characterization of the various tumors.

VPAT 8140. Seminar in Veterinary Pathology. 1-2 hours.

Oasis Title: SEM IN VET PATH.

Prerequisite: Permission of department.

The review and discussion of basic problems and diseases currently or potentially important in the field of veterinary medicine.

VPAT(IDIS) 8150. Virology and Viral Pathogenesis. 3 hours.

Oasis Title: VIRA PATH.

Not open to students with credit in MMIB 8150.

Prerequisite: Permission of department.

Introductory virology includes viral structure, replication, genetics, and immunity. The mechanism(s) by which viruses enter, spread, and cause diseases in humans and animals. Virus-cell interactions include structural and functional alterations of hosts after virus infection and viral components responsible for these alterations.

VPAT(AVMD) 8220. Avian Histopathology. 3 hours. 9 hours lab per week.

Oasis Title: AVIAN HISTOPATH.

Prerequisite: Permission of department.

Detailed microscopic studies will be made of avian tissues and the effects of specific diseases and their processes on them. A working knowledge of tissue processing and differential staining will be included.

VPAT 8320. Pathology of Laboratory Animals. 3 hours.

Oasis Title: PATH LAB ANIMALS.

Prerequisite: Permission of department.

The etiology, tissue alterations, both macroscopic and microscopic, of diseases of the common laboratory animals. Biological profile of each major species of laboratory animals.

VPAT 9000. Doctoral Research. 1-10 hours.

Oasis Title: DOCTORAL RESEARCH.

Prerequisite: Permission of department.

Research while enrolled for a doctoral degree under the direction of faculty members.

VPAT 9005. Doctoral Graduate Student Seminar. 3 hours.

Oasis Title: DOC GRAD STU SEM.

Advanced supervised experience in an applied setting. This course may not be used to satisfy a student's approved program of study.

VPAT 9300. Doctoral Dissertation. 1-10 hours.

Oasis Title: DOCT DISSERTATION.

Prerequisite: Permission of department.

Dissertation writing under the direction of the major professor.

Small Animal Medicine and Surgery (SAMS)

SAMS 5100. Emergency and Critical Care Basics. 1.1 hours.

Oasis Title: ECC BASICS.

Prerequisite: Must be first or second year vet student.

Introduction to basic concepts and monitoring techniques necessary for care of critical patients.

This course prepares students for the advanced ECC elective and the clinical emergency and ICU blocks.

SAMS 5105. Small Animal Infectious Disease. 1.5 hours.

Oasis Title: SA INF DIS.

Prerequisite: Completion of first year veterinary curriculum or equivalent experience.

This course will emphasize diagnosis and treatment of various infectious diseases of dogs and cats. Didactic information will be presented on a variety of the most commonly associated viral, bacterial, fungal, and protozoal diseases. In addition, sessions involving case presentation by students will occur.

SAMS 5110. Small Animal Clinic Emergency Elective. 0.5-1 hour.

Oasis Title: SA EMERGENCY.

Prerequisite: DVM student.

Each clinic session will consist of working with the daytime emergency intern and ICU ward nurses on emergency and critically injured patients. There will be daily ICU ward rounds and clinical discussion on hospitalized patients.

SAMS 5116. Zoo and Wildlife Medicine. 2 hours.

Oasis Title: ZOO/WILDLIFE MED.

Prerequisite: DVM student.

This course concentrates on the following aspects of zoo and wildlife species: husbandry and management (including wildlife and conservation); disease diagnosis; medical and surgical therapy. The course will include all major taxa, and concentrate on common issues that confront the zoo and wildlife veterinarian. The material will be presented using slide (and video)

illustrated lectures.

SAMS 5117. Wildlife Medicine Clinical Elective. 0.5-1.5 hours.

Oasis Title: WILDLIFE MED CLINIC.

Prerequisite: DVM student.

Students will assume case responsibility for all wildlife presented to the hospital. Duties may include morning and evening treatments, emergency care, maintenance of medical records, and diagnostic workup followed by medical or surgical treatment under supervision of the Zoological Medicine Staff.

SAMS 5120. Communication Skills for Veterinarians Laboratory. 1.5 hour.

Oasis Title: COMM SKILL VETS

Prerequisite: Permission of department.

Introduce students to the skills necessary to become an effective communicator. Topics include: engaging the client, roles of the veterinarian, discussing euthanasia, client compliance, financial matters, and interactions with difficult clients. This course is made up of didactic lectures.

SAMS 5125. Introduction to Clinical Thinking. 1 hour.

Oasis Title: CLINICAL THINKING.

Corequisite: Enrolled in the veterinary medicine curriculum.

This course will utilize both large and small groups to introduce first year- or second year- students to the way that clinicians evaluate cases. Groups will work through cases together, both with and without pre-planned materials. Cases in the hospital will also be evaluated.

(SAMS)LAMS 5150. Physical Diagnosis. 1.3 hours.

Oasis Title: PHYS DIAG.

Veterinary clinical diagnostic procedures. Techniques and procedures necessary to perform physical diagnosis on the animal are practiced in the clinic on normal and abnormal animals.

SAMS 5200. Veterinary Ophthalmology. 1.3 hours.

Oasis Title: VET OPHTHALMOLOGY.

Diseases of the eye important in the practice of veterinary medicine.

SAMS 5201. Small Animal Dermatology. 2 hours.

Oasis Title: SA ADVANCED CLINICAL DERMATOLOGY.

Practical application of the course material/knowledge base acquired in the Dermatology core course. The course is based on problem/symptom-oriented, case-based discussions.

(SAMS)LAMS 5203. Principles of Anesthesia. 1 hour.

Oasis Title: PRIN ANESTHESIA.

Principles and application of anesthesia to large and small animals.

(SAMS)(LAMS)VPAT 5205-5205L. Comparative clinical Dermatology. 1 hour.

Oasis Title: COMP CLIN DERM.

Basic morphologic reactions of skin to disease processes, diagnostic techniques, important skin diseases in small and large animals, and current therapy.

SAMS 5215. Exotic Animal Medicine. 2 hours.

Oasis Title: EXOTIC ANIM MED.

Not open to students with credit in SAMS 5115 or SAMS 5600.

The husbandry and diagnosis and treatment of the common diseases of exotic birds, reptiles, and

mammals.

(SAMS)VPHY 5216. Problem-Based Pathophysiology: A Mechanistic Approach to Understanding Disease. 2 hours.

Oasis Title: PROB BAS PATHOPHYSI.

Utilization of a case-based approach to the application of physiology and biochemical principles to clinical problems. Students will develop the ability to take a mechanistic approach to the understanding of clinical disease and therapy. Format will employ problem-based learning principles with students organized in discussion groups.

SAMS 5217. Small Mammal and Aquatic Medicine. 1 hour.

Oasis Title: MAMMAL/AQUATIC MED.

The husbandry and management, reproduction, disease diagnosis and treatment of rabbits, rodents (including guinea pigs, chinchillas, hamsters, mice, rats, and gerbils), ferrets, and pet fish.

SAMS 5218. Reptile and Avian Medicine. 1.5 hours.

Oasis Title: REPTILE & AVIAN MED.

The husbandry, diagnosis, and treatment of the common diseases of commonly kept exotic pet reptiles and birds.

SAMS 5220. Polysystemic Diseases: Hematology and Endocrinology. 1.3 hours.

Oasis Title: POLYSYSTEMIC DIS.

Prerequisite or corequisite: Must be enrolled and taking Clinical Pathology course as sophomores in the College of Veterinary Medicine.

Endocrine pathophysiology and clinical diagnosis, and treatment of a variety of hematologic and multisystemic diseases of large and small animals.

SAMS 5221. Small Animal Clinical Endocrinology. 1.5 hours.

Oasis Title: SMALL ANIMAL ENDO.

Prerequisite: SAMS 5220.

Diagnosis and treatment of endocrine disorders of dogs and cats.

SAMS 5230. Small Animal Urology. 2 hours.

Oasis Title: SMALL ANIM UROLOGY.

The medical and surgical disorders of the urinary system important in dogs and cats.

SAMS 5240. Principles of Surgery. 0.7 hour.

Oasis Title: PRINC SURGERY.

Not open to students with credit in SAMS 5300.

Principles of surgical asepsis, wound healing, and instrument handling.

SAMS 5250. General Surgery Practicum. 1 hour.

Oasis Title: GEN SURG PRACT.

Not open to students with credit in SAMS 5310.

Application of surgical and anesthetic techniques to domestic animals.

SAMS 5260. Clinical Management of Polysystemic Diseases. 0.8 hour.

Oasis Title: POLYSYSTEMIC DISEAS.

Prerequisite or corequisite: VPAT 5250-5250L.

The lectures and AQS sessions will cover clinical diagnosis and treatment of a variety of

hematologic and multisystemic diseases of large and small animals. Topics will include erythrocyte, leukocyte, thrombocyte, dysproteinemic, biochemical, coagulatory, and multisystem immune-mediated disorders. It will interface with the clinical pathology course.

SAMS 5302. Small Animal Oncology. 1 hour.

Oasis Title: SA ONCOLOGY.

Prerequisite: DVM student.

Familiarization of the principles of cancer diagnosis and multimodality therapy in small animal patients. Development of an approach to diagnosing cancer in pets and determining how advanced the cancer is (clinical staging). Introduction to treatment options available and appropriate for different types of cancer in cats and dogs.

SAMS(LAMS) 5305. Neurology. 1.2 hours.

Oasis Title: NEUROLOGY.

This course will provide a systematic approach to localizing a lesion in the nervous system. While the main emphasis will be understanding and identifying lesion location, common diseases of both small and large animals will be discussed.

SAMS 5315. Small Animal Advanced Digestive Diseases. 1 hour.

Oasis Title: SA ADV DIGEST DIS.

Corequisite: SAMS 5350.

Students will present specific small animal digestive diseases in an advanced problem- and case-oriented format; present the basics of small animal dentistry; and convey (practice applying) a rational, problem-oriented approach to the diagnosis and management of specific canine and feline digestive diseases.

SAMS 5316. Marine Mammal Medicine. 1 hour.

Oasis Title: MARINE MAMMAL MED.

Promotes awareness of the resource materials that are available and encourages students to read the course notes, review the reference list, and investigate and research areas of marine mammal medicine. Prepares students for the elective clinical rotations and then medical practice.

SAMS 5320. Small Animal Neuromuscular Diseases. 1.3 hours.

Oasis Title: SMALL ANIM NEUROL.

The disorders of the neuromuscular system of dogs and cats.

SAMS 5325. Small Animal Advanced Anesthesia. 1 hour.

Oasis Title: SA ADVANCED ANES.

Prerequisite or corequisite: SAMS 5240.

To allow veterinary students to become more proficient in the anesthetic management of small animal patients (dogs, cats, small exotics, birds, etc.).

SAMS 5326. Small Animal Clinical Neurology. 1.3 hours.

Oasis Title: SM ANIM NEUROLOGY.

Instruction in small animal neurology. This clinically oriented class teaches students how to perform a neurological exam and establish a correct anatomic diagnosis. In addition, the course covers disease pathophysiology, diagnostic testing, and therapeutic treatments. Didactic lectures are accompanied by video presentations.

SAMS 5330. Small Animal Respiratory Diseases. 1 hour.

Oasis Title: RESPIRATORY DISEASE.

The respiratory diseases of dogs and cats.

(SAMS)LAMS 5333. Respiratory Diseases. 1.3 hours.

Oasis Title: RESP DISEASES.

The diagnosis and treatment of respiratory diseases in horses, food animals, and small animals.

SAMS 5335. Advanced Ophthalmology. 1.5 hours.

Oasis Title: ADVANCED OPHTH.

Prerequisite or corequisite: SAMS 5200.

This elective course offers interested students the opportunity to deepen their knowledge in veterinary ophthalmology. A basic knowledge in veterinary ophthalmology is required for successful participation in this course.

SAMS 5336. Small Animal Respiratory Diseases. 1 hour.

Oasis Title: SM AN RESP DISEASE.

The recognition, physical examination, and management of respiratory disorders of dogs and cats.

SAMS 5340. Small Animal Cardiology. 1.3 hours.

Oasis Title: SM ANIM CARDIOL.

The diagnosis and treatment of cardiovascular diseases in the dog and cat.

SAMS 5345. Small Animal Musculoskeletal Diseases. 1.4 hours.

Oasis Title: SA MUSCULOSKELE DIS.

Prerequisite or corequisite: LAMS(SAMS) 5359.

Musculoskeletal diseases of dogs and cats are presented.

SAMS 5346. Small Animal Cardiology. 1.5 hours.

Oasis Title: SM ANIM CARDIOLOGY.

The recognition, physical examination, pathophysiology, diagnostic procedures, and management of cardiac disorders in dogs and cats.

SAMS 5350. Small Animal Digestive Diseases. 1.2 hours.

Oasis Title: DIGESTIVE DISEASES.

The diagnosis and management of the medical and surgical digestive disorders affecting dogs and cats.

SAMS(LAMS) 5355. Cardiology. 0.4 hour.

Oasis Title: CARDIOLOGY.

Fundamentals of the cardiac evaluation, diagnostic testing, pathophysiology of CHF, recognition of common cardiac disorders, and clinical pharmacology of heart diseases. Emphasis is on auscultation and treatment of cardiomyopathies and valvular disease.

(SAMS)LAMS 5359. Musculoskeletal Diseases. 2 hours.

Oasis Title: MUSCULOSKEL DIS.

Prerequisite: Must be a DVM student.

Fundamental information about musculoskeletal pathophysiology focusing on bone, joint, and tendon/ligament biology. The course will form the basis for future species specific elective courses.

SAMS 5360. Small Animal Orthopedic Diseases. 2 hours.

Oasis Title: ORTHOPEDIC DISEASES.

The diseases of the skeletal system of dogs and cats. Included are special topics in small animal surgery.

SAMS 5372. Small Animal Advanced Surgical Techniques. 1.4 hours.

Oasis Title: ADVANCED SURG TECH.

Prerequisite or corequisite: SAMS(LAMS) 5373 and permission of department.

Application of advanced surgical techniques to small animals.

SAMS(LAMS) 5373. Small Animal and Large Animal Basic Surgical Techniques. 1.5 hours.

Oasis Title: BASIC SURGICAL TECH.

Anesthetic and surgical techniques as applied to small and large animals.

SAMS 5390. Veterinary Polysystemic Diseases. 1.7 hours.

Oasis Title: POLYSYSTEMIC DIS.

Using a problem-solving format, this course includes those animal diseases that affect multiple body systems, including oncology and infectious diseases.

SAMS 5395. Advanced Topics in Emergency and Critical Care. 1.3 hours.

Oasis Title: ECC ADVANCED TOPICS.

Prerequisite: SAMS 5100.

This course is designed to elaborate on basic topics and introduce students to advanced monitoring, disease, and treatment topics in emergency and critical care. This course will prepare students for the (optional) discussion course.

SAMS 5400. Small Animal General Surgery, 4 hours

Oasis Title: SM AN GENERAL SURG

Provides clinic training in small animal general surgery. Students have contact with spontaneously occurring surgical problems of the small animal through which they acquire knowledge and proficiency in diagnosis, prognosis, treatment, and prophylaxis of disease.

SAMS 5405. Small Animal Clinical Anesthesia. 1.3-3.9 hours.

Oasis Title: SM AN CLIN ANESTHES.

Prerequisite: Must be a fourth year veterinary student.

Prerequisite or corequisite: LAMS(SAMS) 5203.

Clinical training in small animal anesthesiology. Students will examine, evaluate, and provide anesthesia and analgesia for clinical patients. Practical skills and knowledge of problem-solving techniques will be emphasized.

SAMS 5415. Exotic Animal, Wildlife, and Zoo Clinical Medicine. 1.3-3.9 hours.

Oasis Title: EXOTIC WLDLFE ZOO.

Prerequisite or corequisite: Completion of two of the following: SAMS 5116 or SAMS 5217 or SAMS 5334.

Exposure to exotic pets, wildlife, aviculture, and zoo animal medicine. Focus on the medical and surgical problems of exotic pets (with some wildlife and zoo animal medicine). Animals seen will primarily be first opinion and referrals. There will also be regular visits to an aviary and local zoo/nature reserve.

SAMS 5430. Small Animal Orthopedic Surgery. 2.6-3.9 hours.

Oasis Title: SA ORTHOPEDIC SURG.

Prerequisite: Must be a fourth year veterinary student.

This elective senior clinical rotation provides students with the opportunity to be an integral part of the initial examination, diagnostic work-up, surgical procedures, and postoperative care involved with local practice and referral orthopedic cases.

SAMS 5435. Small Animal Dermatology Clinical Rotation. 2.6-3.9 hours.

Oasis Title: SA DERM CLIN ROT.

Prerequisite: Must be a fourth year veterinary student.

Provides clinical experience in the examination, work-up, diagnosis, and management of dogs and cats with skin diseases. Performance of dermatologic consultations for the large animal and exotic services.

SAMS 5440. Small Animal Oncology Clinical Rotation. 2.6-3.9 hours.

Oasis Title: SA ONCOLOGY ROTAT.

Prerequisite: Must be a fourth year veterinary student.

Provides clinical experience in the diagnosis, staging, and treatment of canine and feline patients with cancer.

SAMS 5450. Small Animal General Surgery. 2.6-3.9 hours.

Oasis Title: SA GENERAL SURGERY.

Prerequisite: Must be a fourth year veterinary student.

Provides students with the opportunity to be an integral part of the initial examination, diagnostic work-up, surgical procedures, and postoperative care involved with referral soft tissue surgical cases.

SAMS 5455. Small Animal Cardiology Rotation. 3.9 hours.

Oasis Title: SA CARDIOLOGY.

Prerequisite: Must be a fourth year veterinary student.

Instruction in the recognition, evaluation, and treatment of cardiac disorders of the dog and cat. Emphasis is on auscultation, electrocardiography, echocardiography, diagnosis, and therapy.

SAMS 5460. Small Animal Ophthalmology. 2.6-3.9 hours.

Oasis Title: SM AN OPHTHALMOLOGY.

Prerequisite: Must be a fourth year veterinary student.

Development of students' skills in ophthalmology so that students can understand common ocular diseases in animals as they are presented to a small or large animal practitioner, requiring correct diagnosis, appropriate treatment and, if necessary, referral of the case.

SAMS 5465. Small Animal Clinical Neurology/Neurosurgery. 1.3-3.9 hours.

Oasis Title: SA NEURO/NEUROSURG.

Prerequisite: Must be fourth year veterinary student.

Provides students with a strong foundation in performing the neurological exam and understanding how it establishes an accurate neuroanatomic diagnosis.

SAMS 5475. Small Animal Community Practice. 1.3-3.9 hours.

Oasis Title: SA COMMUNITY PRACT.

Prerequisite: Must be a fourth year veterinary student.

Instruction in routine preventative care for dogs and cats, the problem-oriented approach to medical problems commonly seen in dogs and cats, and how to anesthetize and perform surgical

procedures on healthy animals (neutering, ovariohysterectomy, small cutaneous mass removal, and routine dentistry).

SAMS 5480. Small Animal Medicine II, 4 hours

Oasis Title: SM ANIM MED II

Clinical training in small animal medicine and neurology. Students examine, evaluate, and treat animals with spontaneous diseases in the hospital environment. They acquire knowledge and proficiency in diagnosis, prognosis, treatment, and prophylaxis of disease.

SAMS 5485. Small Animal Internal Medicine. 2.6-3.9 hours.

Oasis Title: SM AN INT MEDICINE.

Prerequisite: Must be fourth year veterinary student.

This clinical rotation focuses on internal medicine problems of dogs and cats.

SAMS 5490. Daytime Emergency and Critical Care. 1.3-5.2 hours.

Oasis Title: DAYTIME EMER & CRIT.

Prerequisite: Must be fourth year veterinary student.

Prerequisite or corequisite: SAMS 5100.

Clinical problem solving in daytime emergency, critical care, basis and advanced monitoring, diagnostic procedures, and treatment. Students will have primary case responsibility for critical patients in ICU and assist with triage, admission, and workup of emergency cases.

SAMS 5500/7500. Small Animal Internship. 5-18 hours.

Oasis Title: SM ANIM INTERNSHIP.

Not open to students with credit in SAMS 5500.

Undergraduate prerequisite: DVM degree and permission of department.

Clinical training for the graduate veterinarian desiring in-depth knowledge and skills relative to the diagnosis and treatment of small animal medical and surgical disorders.

SAMS 5610/7610. Small Animal Residency I. 5-15 hours.

Oasis Title: SM ANIM RESIDENCY I.

Not open to students with credit in SAMS 5610.

Undergraduate prerequisite: DVM degree and permission of department.

Clinical training during year one of a residency for graduate veterinarians desiring specialization in internal medicine, surgery, ophthalmology, dermatology, or other clinical specialties.

SAMS 5620/7620. Small Animal Residency II. 5-15 hours.

Oasis Title: SM AN RESIDENCY II.

Not open to students with credit in SAMS 5620.

Undergraduate prerequisite: SAMS 5610/7610 and permission of department.

Clinical training during year two of the residency in internal medicine, surgery, ophthalmology, dermatology, or other clinical specialty.

SAMS 5630/7630. Small Animal Residency III. 5-15 hours.

Oasis Title: SM AN RESIDENCY III.

Not open to students with credit in SAMS 5630.

Undergraduate prerequisite: SAMS 5620/7620 and permission of department.

Clinical training during year three of the clinical residency in internal medicine, surgery, ophthalmology, dermatology, or other clinical specialty.

SAMS 5640/7640. Small Animal Residency IV. 5-15 hours.

Oasis Title: SM AN RESIDENCY IV.

Not open to students with credit in SAMS 5640.

Undergraduate prerequisite: SAMS 5630/7630 and permission of department.

Clinical training during year four of a residency program in internal medicine, surgery, ophthalmology, dermatology, or other clinical specialty.

SAMS 5650/7650. Seminar in Small Animal Medicine and Surgery. 1-4 hours.

Oasis Title: SEMINAR.

This course is a seminar series presented by the student under the direction of a faculty member. The seminar can consist of a literature review or a review of clinical cases. After presentation, the group has questions and discussion.

SAMS 5900. Studies in Clinical Small Animal Medicine. 0.5-8 hours.

Oasis Title: STUDIES SM AN MED.

Specific approved problems in clinical small animal medicine and/or surgery.

SAMS 6310. Acute Pathophysiology. 1.5-3 hours.

Oasis Title: ACUTE PATHOPHYSIOL.

Prerequisite or corequisite: DVM degree or permission of department.

The pathophysiology of patients that are critically ill or injured. Emphasis will be placed on applying these principles of pathophysiology to understanding the mechanism and response to therapy of syndromes involving the critical patient. Course format will include lecture, seminar, and literature review.

SAMS 6990. Special Problems. 1-3 hours.

Oasis Title: SPECIAL PROBLEMS.

Prerequisite: DVM degree or equivalent degree.

Problems defined by a faculty member with the student with approval of the department head. These are usually focused studies or projects by veterinarians entered in a clinical residency program.

SAMS 8010. Seminar in Medicine and Surgery. 1-4 hours.

Oasis Title: SEMINAR MED & SURG.

Prerequisite: (DVM degree or equivalent degree) and permission of department.

Graduate students and staff members will regularly participate in review and discussion of current research findings and methodology concerning medical and surgical disorders of animals.

Large Animal Medicine and Surgery (LAMS)

LAMS(SAMS) 5150. Physical Diagnosis. 1.3 hours.

Oasis Title: PHYS DIAG.

Veterinary clinical diagnostic procedures. Techniques and procedures necessary to perform physical diagnosis on the animal are practiced in the clinic on normal and abnormal animals.

LAMS(POPH) Large Animal Infectious Diseases. 1.5 hours.

Oasis Title: LARGE AN INFECT.

Prerequisite: DVM student.

A review of the principles of infectious diseases of large animals, the mechanisms by which microorganisms infect and cause disease, how the immune response contributes to disease, the principles of infectious disease epidemiology, and how antimicrobials and vaccines can be used

rationally to control these diseases.

LAMS 5170. Using Multi-Media in Your Veterinary Practice. 1 hour.

Oasis Title: MULTI-MEDIA VET.

Prerequisite: DVM student.

Use of multimedia hardware and software in a veterinary practice setting. Each student will develop a multimedia instructional or informational presentation on a topic selected by the student.

LAMS(SAMS) 5203. Principles of Anesthesia. 1 hour.

Oasis Title: PRIN ANESTHESIA.

Principles and application of anesthesia to large and small animals.

(LAMS)(SAMS)VPAT 5205-5205L. Dermatology and Integumentary Pathology. 1 hour.

Oasis Title: DERM AND INTEG PATH.

Morphologic reactions of skin to disease processes. Vocabulary, lesion pathogenesis, recognition of lesion patterns, and gross lesion diagnosis.

LAMS 5211-5211L. Equine Dentistry. 1 hour.

Oasis Title: EQ DENTISTRY.

Prerequisite: Course will be open to students in the second, third, or fourth years of the veterinary curriculum.

An introduction to equine dentistry. Topics to be covered include: instrumentation, sedation, handling, floating with hand and power tools. Extraction of deciduous and permanent teeth via intraoral extraction and various surgical techniques. The labs will involve both cadaver skulls and live horses.

LAMS 5220. Large Animal Advanced Anesthesia. 1 hour.

Oasis Title: LAM ADV ANESTHESIA.

Lectures, case-based discussions, and one two-hour laboratory covering anesthesia of large animals, including the impact of anatomic and physiologic features, selection of anesthetic drugs and techniques, modification of equipment for large animals, considerations of specific diseases, and recognition and treatment of common anesthetic complications.

LAMS 5230. Large Animal Medicine I: Urology, Hematology, Endocrinology. 1.3 hours.

Oasis Title: LAM URO HEM ENDO.

Prerequisite: SAMS 5220 and SAMS 5260 and VPAT 5250-5250L.

Medical aspects of the urinary tract, hematology, and endocrinology of large domestic animals.

LAMS 5240. Problems in Large Animal Medicine. 1 hour.

Oasis Title: PROBLEMS IN LAM.

Prerequisite: Permission of department.

A problem-based course using cases submitted to the DDI service. Students (in a small group of 3-4 along with a facilitator) will develop their learning objectives, and using the resources of the CVM, accomplish their learning objectives and provide a solution to the questions posed by practitioners.

LAMS 5250. Clinical Techniques in Large Animal Medicine and Surgery

Oasis Title: CLINICAL TECHNIQUES

Introduction to procedures commonly performed during diagnosis and treatment of large animal cases. The course is split between lectures describing the procedures and their clinical use and laboratories demonstrating the described techniques

LAMS 5363. Large Animal Emergency Medicine & Surgery

Oasis Title: LA EMER MED/SX

Prerequisite: Permission of department

Clinical rotation in large animal emergency medicine and surgery. Students will participate in the admission, work-up, and treatment of large animal emergencies after hours. Additionally, participants will help with treatments on critical patients in the hospital and take part in topic and case-based rounds.

LAMS 5290. Veterinary Obstetrics. 0.9 hour.

Oasis Title: VET OBSTETRICS.

Prerequisite: Must be DVM student.

Pregnancy and its abnormalities. Parturition, diagnosis, treatment, and prevention of dystocia in cow, mare, ewe/doe, sow, dog, and cat. Cesarean section and fetotomy. Postparturient problems.

LAMS 5301. Ruminant Internal Medicine: Respiratory Diseases. 1 hour.

Oasis Title: RUM INT MED RES DIS.

Prerequisite: 2nd year or above DVM student.

Prerequisite or corequisite: LAMS(SAMS) 5333.

Pathophysiology, etiology, diagnosis, treatment, and prevention of cardiopulmonary diseases of ruminants will be covered.

(LAMS)SAMS 5305. Neurology. 1.2 hours.

Oasis Title: NEUROLOGY.

This course will provide a systematic approach to localizing a lesion in the nervous system. While the main emphasis will be understanding and identifying lesion location, common diseases of both small and large animals will be discussed.

LAMS 5310. Large Animal Theriogenology Selective. 2.6 hours.

Oasis Title: LG AN THERIO SELECT.

Not open to students with credit in LAMS 5310L.

This is a comprehensive course that encompasses the didactic aspects of large animal theriogenology.

LAMS 5311. Small Animal Theriogenology Selective. 1.4 hours.

Oasis Title: SA THERIO.

This is a comprehensive course that encompasses the didactic aspects of small animal theriogenology.

LAMS 5313. Equine Respiratory Diseases. 1.5 hours.

Oasis Title: EQ RESPIRATORY DIS.

Prerequisite: LAMS(SAMS) 5333.

The study of etiology, pathophysiology, clinical signs, diagnosis, therapy, and prevention of common equine respiratory diseases and cardiac diseases.

LAMS 5314. Large Animal Neurology. 1 hour.

Oasis Title: LA NEUROLOGY.

Prerequisite: SAMS(LAMS) 5305.

The etiology, pathophysiology, clinical signs and localization, diagnosis, therapy, and prevention of large animal neurologic diseases will be covered.

LAMS 5315. Equine Clinical Diagnostic Imaging. 1 hour.

Oasis Title: EQ CLIN DIAG IMAGIN.

Radiographic and ultrasonographic imaging and ultrasonographic imaging of osseous and soft tissue disorders of the musculoskeletal, abdominal, and thoracic systems.

LAMS 5323. Large Animal Cardiology. 0.6 hour.

Oasis Title: LA CARDIOLOGY.

Prerequisite: Third-year student standing.

Review and discussion of clinical signs, diagnosis, and treatment of the most common cardiac diseases of large animals. Lectures will review "core" cardiology, sound recordings and ECG used to simulate normal and abnormal cardiac findings, and consist of audience participation (keypad interaction) case presentations.

LAMS(SAMS) 5333. Respiratory Diseases. 1.3 hours.

Oasis Title: RESP DISEASES.

The diagnosis and treatment of respiratory diseases in horses, food animals, and small animals.

LAMS 5350. Large Animal Digestive Diseases. 1.9 hours.

Oasis Title: LA DIGESTIVE DIS.

The diagnosis, treatment, and prognosis of diseases of the equine and food animal digestive systems.

LAMS 5351. Equine Digestive Diseases. 1 hour.

Oasis Title: EQ DIGEST DISEASES.

Prerequisite: LAMS 5350.

Continuation of the material presented in the Digestive Diseases of Large Animals core course. Focus is on the presenting complaint of equine abdominal pain. The material presented is suitable for students interested in a mixed animal, equine, or large animal exclusive track.

LAMS 5353. Equine Lameness and the Foot. 1 hour.

Oasis Title: EQ LAMENESS & FOOT.

Significant lameness as a clinical problem, identification of the lame limb, and diagnostic techniques used to identify the cause. The equine foot is discussed in terms of its form and function in relation to disease with emphasis on relating the symptoms, diagnosis and treatment to basic principles. Individual diseases and cases are discussed.

(LAMS)SAMS 5355. Cardiology. 0.4 hour.

Oasis Title: CARDIOLOGY.

Fundamentals of the cardiac evaluation, diagnostic testing, pathophysiology of CHF, recognition of common cardiac disorders, and clinical pharmacology of heart diseases. Emphasis is on auscultation and treatment of cardiomyopathies and valvular disease.

LAMS(SAMS) 5359. Musculoskeletal Diseases. 2 hours.

Oasis Title: MUSCULOSKEL DIS.

Prerequisite: Must be a DVM student.

Fundamental information about musculoskeletal pathophysiology focusing on bone, joint, and tendon/ligament biology. The course will form the basis for future species specific elective

courses.

(LAMS)SAMS 5373. Small Animal and Large Animal Basic Surgical Techniques. 1.5 hours.

Oasis Title: BASIC SURGICAL TECH.

Anesthetic and surgical techniques as applied to small and large animals.

LAMS 5375. Equine Surgery I: Musculoskeletal. 1 hour.

Oasis Title: EQ SURGERY I.

Diseases of the musculoskeletal system in which surgery may be a treatment. Emphasis on diagnostic techniques, surgical decision making, surgical techniques, and postoperative care. This course emphasizes orthopedic problems.

LAMS 5376. Equine Surgery II: Soft Tissue Surgery. 1 hour.

Oasis Title: EQ SURGERY II.

Diseases of the digestive, respiratory, integumental, and reproductive systems in which surgery may be a treatment. Emphasis on diagnostic techniques, surgical decision making, surgical techniques, and postoperative care.

LAMS 5380. Large Animal Advanced Surgical Techniques. 1 hour.

Oasis Title: LA ADV SURG TECH.

Advanced surgical techniques to equine and production animals.

LAMS 5385. Bovine Surgery. 1 hour.

Oasis Title: BOVINE SURG.

The course discusses diseases of the digestive, musculoskeletal, reproductive systems in which surgery may be a treatment. Emphasis is placed on diagnostic techniques, surgical decision making, surgical techniques, and post-operative care.

LAMS 5395. Artificial Insemination, Embryo Transfer, and Advanced Reproductive Technologies. 0.6 hour.

Oasis Title: AI ET ART.

Prerequisite: Third-year student standing in the College of Veterinary Medicine.

A combination of lectures and labs will introduce students to Artificial Insemination (AI), Embryo Transfer (ET) in large animals, and other Advanced Reproductive Aechnologies (ART). Students will perform AI and actively participate in the practical management and performance of an ET program.

LAMS 5400. Large Animal Advanced Clinical Anesthesia. 1.3-3.9 hours.

Oasis Title: LRG AN ADV ANES.

Prerequisite: LAMS 5220.

Clinical training in large animal anesthesiology. Students will examine, evaluate, and provide anesthesia and analgesia for clinical patients in the large animal hospital. Practical skills and knowledge of problem-solving techniques will be emphasized.

LAMS 5415. Large Animal Internal Medicine. 1.3-3.9 hours.

Oasis Title: LAM INT MED.

Prerequisite: Fourth year veterinary student.

A three-week clinical rotation in the large animal internal medicine of horses, ruminants, and pigs.

LAMS 5420. Large Animal Surgery. 1.3-3.9 hours.

Oasis Title: LARGE ANIMAL SURG.

Clinical training in general large animal surgery with emphasis on equine soft tissue, musculoskeletal, soft tissue disease, food animal lameness, alimentary surgery, diagnosis and pathophysiology of disease.

LAMS 5425. Large Animal Farm Practice. 1.3-3.9 hours.

Oasis Title: LA FARM PRACTICE.

Clinical training in farm animal medicine. Pathophysiological mechanisms of disease in the individual animal. Examination, evaluation, and treatment of domesticated animals in the farm environment.

LAMS 5435. Theriogenology. 1.3-3.9 hours.

Oasis Title: THERIOGENOLOGY.

Prerequisite: LAMS 5310.

This is a comprehensive clinical rotation that encompasses the didactic and clinical aspects of equine, bovine, and exotic theriogenology with the potential of some small animal cases. Emphasis is on the practical implementation of the specialty. The course is only available to fourth-year students during their final year.

LAMS 5436. Small Animal Theriogenology. 3.9 hours.

Oasis Title: SA THERIOGENOLOGY.

Prerequisite: LAMS 5311.

This is a comprehensive clinical rotation that encompasses the didactic and clinical aspects of small animal theriogenology. Emphasis is on the practical implementation of the specialty. The course is only available to fourth-year students.

LAMS 5455. Advanced Equine Theriogenology. 3.9-7.8 hours.

Oasis Title: EQ THERIOGENOLOGY.

Prerequisite: LAMS 5310.

A comprehensive course encompassing the didactic and clinical aspects of equine theriogenology. The emphasis is on practical implementation of the specialty. The course is only available to fourth year students during the equine breeding season.

LAMS 5470. Equine Diagnostic Imaging and Lameness. 1.3-3.9 hours.

Oasis Title: EQ DIA IMAG & LAME.

Prerequisite or corequisite: LAMS 5415 or LAMS 5420.

The object of this course is to provide students with an in-depth understanding of equine lameness, and the diagnostic imaging techniques used and their interpretation.

LAMS 5900. Studies in Clinical Large Animal Medicine. 0.7-8 hours.

Oasis Title: LA CLIN MEDICINE.

Studies involving different areas of large animal medicine, surgery, population medicine, or theriogenology.

LAMS 5910L. Special Procedures in Large Animal Medicine. 1.3 hours. 1 hour lecture and 4 hours lab per week.

Oasis Title: LAM PROCEDURES.

This course will be a laboratory elective offered to third year veterinary students. The focus of the laboratories is to provide hands-on training in large animal physical examination and diagnostic and therapeutic procedures prior to the beginning of the fourth year of clinical

training.

LAMS 7005. Graduate Student Seminar. 3 hours.

Oasis Title: GRAD STUDENT SEM.

Advanced supervised experience in an applied setting. This course may not be used to satisfy a student's approved program of study.

LAMS 7500. Large Animal Internship. 5-17 hours.

Oasis Title: LARGE ANIMAL INTERN.

Not open to students with credit in LAMS 5500.

Prerequisite: DVM degree and permission of department.

Clinical training for the graduate veterinarian desiring in-depth knowledge and skills relative to the diagnosis and treatment of diseases affecting food animals and horses.

LAMS 7610. Large Animal Residency I. 5-17 hours.

Oasis Title: LA RESIDENCY I.

Prerequisite: DVM degree and permission of department.

This course provides clinical training during year one of a residency for graduate veterinarians desiring to specialize in large animal medicine, surgery, theriogenology, or anesthesiology.

LAMS 7620. Large Animal Residency II. 5-17 hours.

Oasis Title: LA RESIDENCY II.

Prerequisite: DVM degree and permission of department.

This course provides clinical training during year two of a residency for graduate veterinarians in large animal medicine, surgery, theriogenology, or anesthesiology.

LAMS 7630. Large Animal Residency III. 5-17 hours.

Oasis Title: LA RESIDENCY III.

Prerequisite: LAMS 7620 and permission of department.

This course provides clinical training during year three of a residency for graduate veterinarians in large animal medicine, surgery, theriogenology, or anesthesiology.

LAMS 7640. Large Animal Residency IV. 5-18 hours.

Oasis Title: LA RESIDENCY IV.

Prerequisite: DVM degree and permission of department.

This course provides clinical training for graduate veterinarians in the fourth year of a large animal residency in animal medicine, surgery, theriogenology, or anesthesiology.

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