**CURRICULUM DIGEST**

**Year 1 Required Courses**

**Year 1 Required Fall Semester Course Descriptions:**

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| **Year of Curriculum** | **Course Title** | **Course Number** | **Course Status** | **Credit Hours** | **Semester** | **Mode of Instruction** |
| Year 1 | Professional Development I | CVM 5011 | Required | 1  | Fall | Lecture |
| Year 1 | Professional Development II | CVM 5021 | Required | 1  | Fall | Lecture |
| Year 1 | Veterinary Histology | CVM 5073 | Required | 3 | Fall (1st half) | Lecture |
| Year 1 | Veterinary Neuroscience | CVM 5013 | Required | 3 (2 hours lecture/1 hour laboratory) | Fall (2nd half) | Lecture |
| Year 1 | Infectious Agents I | CVM 5023 | Required | 3  | Fall | Lecture |
| Year 1 | Immunology | CVM 5033 | Required | 3  | Fall | Lecture |
| Year 1 | Veterinary Physiology | CVM 5036 | Required | 6  | Fall | Lecture |
| Year 1 | Veterinary Anatomy I | CVM 5046 | Required | 6 (1 hour lecture/5 hours laboratory) | Fall | Laboratory |
|  |  |  |  | Semester Total= 26 |  |  |

In Years 1 and 2, 1 credit hour/semester is awarded for 750 minutes (15 hours) of lecture and 1500 minutes (30 hours) of laboratory activities per course.

**CVM 5011 Professional Development I:** Exposure to important issues necessary for success in the curriculum and in the profession (lectures on research topics, cultural competency, career options, ethical issues, implicit bias). Students will build upon many of the topics introduced in this course throughout his/her academic and professional career.

**CVM 5021 Professional Development II:** Exposure to important issues necessary for success in the curriculum and in the profession (lectures on career options, disaster preparedness, loan forgiveness and repayment options, evidence-based medicine, animal welfare). Students will build upon many of the topics introduced in this course throughout his/her academic and professional career.

**CVM 5073 Veterinary Histology:** Basic microscopic anatomy, cells, tissues, organs, and organ systems.

**CVM 5013 Veterinary Neuroscience:** Basic anatomic and physiologic concepts foundational to understanding animal behaviors and veterinary neurology.

**CVM 5023 Infectious Agents I:** Principles regarding the classification, pathophysiological mechanisms, control, diagnosis, and zoonotic potential of bacteria of importance in veterinary medicine.

**CVM 5033 Immunology:** Presentation of the principles regarding immune responses in health and disease.

**CVM 5036 Veterinary Physiology:** Presentation of fundamental concepts, principles, and issues in veterinary physiology specifically related to cellular physiology, muscle and nerve function, cardiovascular, respiratory, urinary, digestive, endocrine, and reproductive physiology.

**CVM 5046 Veterinary Anatomy I:** Normal structure of the body and its organ systems is obtained through dissection and study of specimens and radiographs, as well as through study of how adult structures develop. The canine and equine species are the primary models with minor emphasis on other species (i.e. feline, bovine and porcine).

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| **Year of Curriculum** | **Course Title** | **Course Number** | **Course Status** | **Credit Hours** | **Semester** | **Mode of Instruction** |
| Year 1 | Veterinary Anatomy II | CVM 5072 | Required | 2 (1 hour lecture/ 1 hour laboratory) | Spring (1st half) | Laboratory |
| Year 1 | Professional Development III | CVM 5111 | Required | 1  | Spring | Lecture |
| Year 1 | Veterinary Epidemiology | CVM 5022 | Required | 2 | Spring (2nd half) | Lecture |
| Year 1 | Veterinary Pathology | CVM 5044 | Required | 4 | Spring | Lecture |
| Year 1 | Veterinary Parasitology | CVM 5163 | Required | 3 (2 hours lecture/1 hour laboratory)  | Spring | Lecture |
| Year 1 | Infectious Agents II | CVM 5193 | Required | 3 | Spring | Lecture |
| Year 1 | Veterinary Pharmacology I | CVM 5223 | Required | 3  | Spring | Lecture |
|  |  |  |  | Semester Total= 18 |  |  |

**Year 1 Required Spring Semester Course Descriptions:**

**CVM 5072 Veterinary Anatomy II:** Normal structure of the body and its organ systems is obtained through dissection and study of specimens and radiographs. The canine and equine species are the primary models for these topics. There is a minor emphasis on other mammalian species (i.e. feline, bovine, and porcine) and members of other classes of animals (reptiles, fish, and birds. The bovine alimentary system will be studied and compared to the canine and equine alimentary systems, which were previously covered in CVM 5046 – Veterinary Anatomy I.

**CVM 5111 Professional Development III:** This course provides an overview of the role of One Health in the global environment. It will identify important global trends, issues, and potential solutions to challenges in animal and human health. It will explore the role of animal agriculture and veterinary medicine in international development of multicultural environments that involves conservation, disease control and prevention, food security and food safety, animal welfare, and global trade.

**CVM 5022 Veterinary Epidemiology:** Presentation of basic concepts and principles of epidemiology and the relationship to animal and human health.

**CVM 5044 Veterinary Pathology:** Introduction to the host response to endogenous and exogenous injury. Emphasis on general/systemic anatomic pathology.

**CVM 5163 Veterinary Parasitology:** Presentation of principles essential to understanding the classification, pathophysiological mechanisms, control, and diagnosis of parasites of importance in veterinary medicine.

**CVM 5193 Infectious Agents II:** A systematic presentation of viruses and fungi and their features of importance in veterinary medicine including disease synonyms, morphology, classification, and character of the disease. Epizootiology and pathogenesis, immunity, cultivation, diagnosis, treatment, prevention and control, and zoonotic potential of individual agents will be covered.

**CVM 5223 Veterinary Pharmacology I:** The basic concepts of absorption, mechanism of action, metabolism, excretion, side effects, and toxicity of pharmaceutical agents and how these parameters correlate with therapeutic and diagnostic applications.

**Year 2 Required Courses**

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| **Year of Curriculum** | **Course Title** | **Course Number** | **Course Status** | **Credit Hours** | **Semester** | **Mode of Instruction** |
| Year 2 | Veterinary Clinical Pathology | CVM 5123 | Required | 3 | Fall (1st half) | Lecture |
| Year 2 | Toxicology | CVM 5152 | Required | 2 (1 hour lecture/1 hour laboratory) | Fall (2nd half) | Lecture |
| Year 2 | Theriogenology | CVM 5143 | Required | 3 (2 hours lecture/1 hour laboratory) | Fall | Lecture |
| Year 2 | Equine Medicine & Surgery I | CVM 5153 | Required | 3 (2 hours lecture/1 hour laboratory) | Fall | Lecture |
| Year 2 | Small Animal Medicine & Surgery I | CVM 5186 | Required | 6 (5 hours lecture, 1 hour laboratory) | Fall | Lecture |
| Year 2 | Introduction to Veterinary Anesthesia | CVM 5213 | Required | 3 (2 hours lecture/1 hour laboratory) | Fall | Lecture |
| Year 2 | Pharmacology II | CVM 5553 | Required | 3 | Fall | Lecture |
|  |  |  |  | Semester Total= 23 |  |  |

**Year 2 Required Fall Semester Course Descriptions:**

**CVM 5123 Veterinary Clinical Pathology:** This course covers diagnostic laboratory procedures and their correlation with pathologic conditions. Laboratory practices in hematology, clinical chemistries and urinalyses will be covered in all domestic mammals.

**CVM 5152 Toxicology:** Diagnosis and management of animal intoxications.

**CVM 5143 Theriogenology:** The study of anatomy, physiology, and pathology of the male and female reproductive systems of domestic animals and management factors which can affect the reproductive health and performance of domestic animals.

**CVM 5153 Equine Medicine & Surgery I:** Clinical reasoning, principles of diagnosis and the medical and surgical management of multi-systemic disorders involving the musculoskeletal system, the skin, and special sense organs as well as reportable diseases of horses.

**CVM 5186 Small Animal Medicine & Surgery I:** This course covers diagnosis and treatment of medical and surgical conditions of the urogenital, gastrointestinal, cardiorespiratory, hematologic, and nervous system, plus emergency medicine.

**CVM 5213 Introduction to Veterinary Anesthesia:** This course is an introduction to principles of anesthesia for the common veterinary species and includes equipment, drugs, methods of administration, monitoring, and methods for specific disease states.

**CVM 5553 Pharmacology II:** This course emphasizes antimicrobial therapy. It will also address regulatory issues, vaccinology, and the management of disease syndromes.

**Year 2 Required Spring Semester Course Descriptions:**

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| **Year of Curriculum** | **Course Title** | **Course Number** | **Course Status** | **Credit Hours** | **Semester** | **Mode of Instruction** |
| Year 2 | Professional Development IV | CVM 5121 | Required | 1  | Spring | Lecture |
| Year 2 | Diagnostic Imaging | CVM 5162 | Required | 2 | Spring (1st half) | Lecture |
| Year 2 | Veterinary Preventive Medicine | CVM 5133 | Required | 3 | Spring (2nd half) | Lecture |
| Year 2 | Equine Medicine & Surgery II | CVM 5173 | Required | 3(2 hours lecture/1 hour laboratory) | Spring | Lecture |
| Year 2 | Food Animal Medicine & Surgery  | CVM 5175 | Required | 5(4 hours lecture/1 hour laboratory) | Spring | Lecture |
| Year 2 | Special Species | CVM 5183 | Required | 3 | Spring | Lecture |
| Year 2 | Small Animal Medicine & Surgery II | CVM 5196 | Required | 6(5 hours lecture/1 hour laboratory) | Spring | Lecture |
|  |  |  |  | Semester Total= 23 |  |  |

**CVM 5121 Professional Development IV:** This course primarily focuses on financial/personal success in veterinary practice (80%), but also include lectures on jurisprudence, legal issues, and professional communication.

**CVM 5162 Diagnostic Imaging:** This course introduces the fundamental principles of radiographic diagnosis of abnormal body systems. Included are the physics and principles of interpretation and visual perception.

**CVM 5133 Veterinary Preventive Medicine:** Management and prevention of animal diseases that impact animal and human health.

**CVM 5173 Equine Medicine & Surgery II:** The principles of diagnosis and management of disorders involving the immunologic, urinary, neurologic, respiratory, endocrine and cardiovascular systems of the horse.

**CVM 5175 Food Animal Medicine & Surgery:** Diseases and common surgical conditions of food animals; History, clinical signs, diagnostic methods, medical treatment, surgical correction, prognosis, and prevention are covered.

**CVM 5183 Special Species:** This course covers applied anatomy, physiology, husbandry and common diseases in avian, aquatic, reptiles, amphibians, rodents, and other minor species.

**CVM 5196 Small Animal Medicine & Surgery I:** This course covers diagnosis and treatment of medical and surgical conditions of the musculoskeletal, endocrine, and integumentary systems, as well as small animal oncology.

**PHASE 1 - ELECTIVE COURSE**

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| **Year of Curriculum** | **Course Title** | **Course Number** | **Course Status** | **Credit Hours** | **Semester** | **Mode of Instruction** |
| Year 2 | Tropical Veterinary Medicine & One Health  | CVM 5990 | Elective | 3 | Summer | Practicum |

**Phase 1, Year 2 Elective Course Description:**

**CVM 5990 Tropical Veterinary Medicine and One Health:** (Prerequisite: Enrollment in professional veterinary degree program.) Practicum. This course exposes students to tropical veterinary medicine in Uganda, a country with mostly rural veterinary practices. Emphasis will include One Health perspectives of tropical veterinary medicine and cultural emersion in international animal production, animal health, disease surveillance, public health systems, and food safety.

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| **Year of Curriculum** | **Course Title** | **Course Number** | **Course Status** | **Credit Hours** | **Semester** | **Mode of Instruction** |
| Year 3 | Laboratory Services | CVM 5214 | Required | 4 | Summer, Fall, & Spring | Clinical Rotation |
| Year 3 | Radiology | CVM 5224 | Required | 4 | Summer, Fall, & Spring | Clinical Rotation |
| Year 3 | Anesthesiology | CVM 5234 | Required | 4 | Summer, Fall, & Spring | Clinical Rotation |
| Year 3 | Community Veterinary Services | CVM 5246 | Required | 6 | Summer, Fall, & Spring | Clinical Rotation |
| Year 3 | Small Animal Surgery  | CVM 5256 | Required | 6 | Summer, Fall, & Spring | Clinical Rotation |
| Year 3 | Equine Medicine & Surgery | CVM 5266 | Required | 6 | Summer, Fall, & Spring | Clinical Rotation |
| Year 3 | Food Animal Practice  | CVM 5276 | Required | 6 | Summer, Fall, & Spring | Clinical Rotation |
| Year 3 | Population Medicine | CVM 5273 | Required | 3 | Summer, Fall, & Spring | Clinical Rotation |
|  |  |  |  | Year Total= 39 |  |  |

**Year 3 Required Clinical Rotations**

In Years 3 & 4, 1 credit hour/semester is awarded for 1 week of clinical experiences in core rotations and elective courses.

**Year 3 Required Clinical Rotation Descriptions:**

**CVM 5214 Laboratory Services:** rotation through the Diagnostic Laboratory of the Animal Health Center. Responsibilities include diagnostic techniques and data interpretation in clinical pathology, pathology, parasitology, and bacteriology.

**CVM 5224 Radiology:** Supervised rotation in diagnostic imaging. Areas of study include radiographic and ultrasound techniques and interpretation and radiotherapy.

**CVM 5234 Anesthesiology:** Supervised rotation in Anesthesiology. Areas of study include pre-anesthetic patient evaluation, anesthetic induction, maintenance and monitoring and post-anesthetic patient management.

**CVM 5246 Community Veterinary Services:** Supervised rotation through the Community Veterinary Services of the Small Animal Health Center. Students participate in all aspects of patient care and health management. Disciplines included are small animal general practice, dermatology, dentistry, shelter medicine and surgery, and exotic species.

**CVM 5256 Small Animal Surgery:** Supervised rotation through Small Animal Surgery. Students participate in the receiving, analysis, surgery, and management of patients referred for surgical care.

**CVM 5266 Equine Medicine & Surgery:** Supervised rotation through the Equine unit of the Large Animal Clinic. Students participate in the receiving, analysis, and management of patients referred for care.

**CVM 5276 Food Animal Practice:** Supervised rotation through the Food Animal section of the Animal Health Center. Students participate in the problem analysis, case management, and development of health maintenance programs.

**CVM 5273 Population Medicine:** This course focuses on animal health assessment at the population level. It emphasizes decision making an best practices to maintain health in large and small animal populations.

**Year 4 Required Clinical Rotations**

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| **Year of Curriculum** | **Course Title** | **Course Number** | **Course Status** | **Credit Hours** | **Semester** | **Mode of Instruction** |
| Year 4 | Ambulatory/Large Animal Primary Care | CVM 5282 | Required | 2 | Summer, Fall, & Spring | Clinical Rotation |
| Year 4 | Flowood/AERC | CVM 5292 | Required | 2 | Summer, Fall, & Spring | Clinical Rotation |
| Year 4 | Clinicopathologic Conference | CVM 5302 | Required | 1 | Summer, Fall, & Spring | Clinical Rotation |
| Year 4 | Small Animal Emergency & Critical Care Medicine | CVM 5310 | Required | 4 | Summer, Fall, & Spring | Clinical Rotation |
| Year 4 | Small Animal Internal Medicine  | CVM 5380 | Required | 6 | Summer, Fall, & Spring | Clinical Rotation |
| Year 4 | Veterinary Specialty Center | CVM 5364 | Required | 4 | Summer, Fall, & Spring | Clinical Rotation |
|  |  |  |  | Year Total (core)= 19 |  |  |

In Phase 2, 1 credit hour/semester is awarded for 1 week of clinical experiences in core rotations and elective courses.

**Year 4 Required Rotation Descriptions:**

**CVM 5282 Ambulatory/Large Animal Primary Care:** Supervised clinical rotation through the Ambulatory/Large Animal Primary Care service. Students participate in large animal medicine and surgery in a field setting.

**CVM 5292 Flowood/AERC:** Supervised clinical rotation at the Animal Emergency and Referral Center, Flowood, MS, where students actively participate in all aspects of patient care directly with clinicians.

**CVM 5301 Clinicopathologic Conference:** Advanced communication skills. Professional writing and public speaking to the scientific audience. A paper is written under the direction of a faculty advisor that is suitable for submission to JAVMA or other scientific journals. Papers are archived in a retrievable database. Oral presentations are made to faculty and third and fourth year students.

**CVM 5310 Small Animal Emergency & Critical Care Medicine:** Supervised clinical rotation in the small animal intensive care and emergency services. Emphasis is on the evaluation and management of the critically ill or injured animal.

**CVM 5380 Small Internal Medicine:**  Advanced supervised rotation through the Small Animal Clinic. Students participate fully in the receiving, analysis, and management of patients referred for medical care.

**CVM 5364 Veterinary Specialty Center:** Supervised clinical rotation in neurology, radiation oncology, and ophthalmology at the Stark Road satellite clinic in Starkville, MS.

**Electives Available in Years 3 and 4**

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| **Year of Curriculum** | **Course Title** | **Course Number** | **Course Status** | **Credit Hours** | **Semester** | **Mode of Instruction** |
| Years 3 & 4 | Directed Individual Study  | CVM 5000 | Elective | 2-6 | Summer, Fall, & Spring | Variable (Research, Practicum, or Lecture) |
| Year 4 | Directed Individual Study(NAVLE Review) | CVM 5004 | Elective | 4 | Fall | Lecture |
| Years 3 & 4 | Veterinary Disaster Management | CVM 5182 | Elective | 2 | Summer | Online  |
| Years 3 & 4 | Clinical Pharmacy | CVM 5392 | Elective | 2 | Fall & Spring | Practicum |
| Years 3 & 4 | Advanced Rotation in Radiology | CVM 5420 | Elective | 2-4 | Summer, Fall, & Spring | Practicum |
| Years 3 & 4 | Advanced Rotation in Anesthesiology | CVM 5430 | Elective | 2-4 | Summer, Fall, & Spring | Practicum |
| Years 3 & 4 | Advanced Rotation in Small Animal Surgery | CVM 5454 | Elective | 4 | Summer, Fall, & Spring | Practicum |
| Years 3 & 4 | Advanced Rotation in Equine Medicine & Surgery | CVM 5464 | Elective | 4 | Summer, Fall, & Spring | Practicum |
| Years 3 & 4 | Advanced Rotation in Food Animal Practice | CVM 5474 | Elective | 4 | Summer, Fall, & Spring | Practicum |
| Years 3 & 4 | Veterinary Medicine/Animal Industry Externship 1 | CVM 5510 | Elective | 2-6 | Summer, Fall, & Spring | Practicum |
| Years 3 & 4 | Veterinary Medicine/Animal Industry Externship 2 | CVM 5520 | Elective | 2-6 | Summer, Fall, & Spring | Practicum |
| Years 3 & 4 | Veterinary Medicine/Animal Industry Externship 3 | CVM 5530 | Elective | 2-6 | Summer, Fall, & Spring | Practicum |

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| **Year of Curriculum** | **Course Title** | **Course Number** | **Course Status** | **Credit Hours** | **Semester** | **Mode of Instruction** |
| Years 3 & 4 | Veterinary Medicine/Animal Industry Externship 4 | CVM 5540 | Elective | 2-6 | Summer, Fall, & Spring | Practicum |
| Years 3 & 4 | Veterinary Medicine/Animal Industry Externship 5 | CVM 5550 | Elective | 2-6 | Summer, Fall, & Spring | Practicum |
| Years 3 & 4 | Veterinary Cardiology | CVM 5552 | Elective | 2 | Fall & Spring | Lecture |
| Years 3 & 4 | Advanced Clinical Rotation (ACR 1) | CVM 5560 | Elective | 2-6 | Summer, Fall, & Spring | Practicum |
| Years 3 & 4 | Advanced Clinical Rotation (ACR 2) | CVM 5570 | Elective | 2-6 | Summer, Fall, & Spring | Practicum |
| Years 3 & 4 | Advanced Clinical Rotation (ACR 3) | CVM 5580 | Elective | 2-6 | Summer, Fall, & Spring | Practicum |
| Years 3 & 4 | Large Animal Ambulatory (ACR) | CVM 5580 | Elective | 2-4 | Summer, Fall, & Spring | Practicum |
| Years 3 & 4 | Comparative Endocrinology | CVM 5602 | Elective | 2 | Summer | Lecture |
| Years 3 & 4 | Shelter Medicine Spay/Neuter | CVM 5640 | Elective | 2 | Summer, Fall, & Spring | Practicum |
| Years 3 & 4 | Equine Podiatry | CVM 5652 | Elective | 2 (1 hour lecture/1 hour laboratory) | Spring | Laboratory |
| Years 3 & 4 | Clinical Neurology | CVM 5662 | Elective | 2 | Fall | Lecture |
| Years 3 & 4 | Veterinary Dentistry | CVM 5672 | Elective | 2 (1 hour lecture/1 hour laboratory) | Spring | Lecture/Laboratory Combination |
| Years 3 & 4 | Veterinary Ophthalmology | CVM 5682 | Elective | 2 | Fall & Spring | Lecture |
| Years 3 & 4 | Veterinary Business Management | CVM 5692 | Elective | 2 | Spring | Lecture |
| Years 3 & 4 | Clinical Small Animal Hematology & Immunology | CVM 5702 | Elective | 2 | Fall | Lecture |

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| **Year of Curriculum** | **Course Title** | **Course Number** | **Course Status** | **Credit Hours** | **Semester** | **Mode of Instruction** |
| Years 3 & 4 | Small Ruminant Production Medicine | CVM 5722 | Elective | 2 | Spring | Practicum |
| Years 3 & 4 | Advanced Small Animal Surgery | CVM 5754 | Elective | 4(1 hour lecture/3 hours laboratory) | Summer & Spring | Laboratory |
| Years 3 & 4 | Advanced Equine Reproduction | CVM 5764 | Elective | 4(1 hour lecture/3 hours laboratory) | Summer & Spring | Practicum |
| Years 3 & 4 | Advanced Canine Theriogenology | CVM 5772 | Elective | 2 | Spring | Practicum |
| Years 3 & 4 | Practical Small Animal Oncology  | CVM 5802 | Elective | 2 | Fall & Spring | Lecture |
| Years 3 & 4 | The Feline Patient | CVM 5814 | Elective | 4 | Fall | Lecture |
| Years 3 & 4 | Clinical Pharmacology | CVM 5842 | Elective | 2 | Summer | Lecture |
| Years 3 & 4 | Small Animal Physical Rehabilitation | CVM 5452 | Elective | 2 | Fall/Spring | Practicum |
| Years 3 & 4 | Aquarium Health Management | CVM 5854 | Elective | 2 | Spring | Lecture |
| Years 3 & 4 | Equine Surgery & Lameness | CVM 5862 | Elective | 2 | Fall | Practicum |
| Years 3 & 4 | Bovine Production Medicine | CVM 5864 | Elective | 4 (2 hours lecture/2 hours laboratory) | Fall | Lecture/LaboratoryCombination |
| Years 3 & 4 | Bovine Theriogenology | CVM 5874 | Elective | 4 (1 hour lecture/3 hours laboratory) | Spring | Practicum |
| Years 3 & 4 | Small Animal Dermatology | CVM 5242 | Elective | 2 | Spring | Lecture |
| Years 3 & 4 | Small Animal Gastroenterology | CVM 5882 | Elective | 2 | Fall | Lecture |
| Years 3 & 4 | Clinical Behavior Medicine | CVM 5990  | Elective | 2 | Summer | Lecture |
| Years 3 & 4 | Equine Clinical Nutrition  | CVM 5990 | Elective | 2 | Summer | Lecture |
| Years 3 & 4 | Small Animal Clinical Nutrition | CVM 5990 | Elective | 2 | Summer | Lecture |
| Years 3 & 4 | Tropical Veterinary Medicine & One Health  | CVM 5906 | Elective | 3-6 | Summer | Practicum |

**Year 3 & 4 Elective Course Descriptions:**

**CVM 5000 Directed Individual Study:** Areas of emphasis, location, hours and credits to be arranged with responsible faculty advisor.

**CVM 5004 Directed Individual Study:** Professional development and review. The course is designed to assist students whose GPA places them in the lowest quartile of the class at the end of their sophomore year. These students are considered at risk for an unsuccessful outcome on NAVLE. Review lectures, case presentations, and practice examinations are provided.

**CVM 5182 Veterinary Disaster Management:** Veterinary disaster management concerns animal health and well-being before, during, and after disasters. This course Includes general incident management training for local, state, and federal levels.

**CVM 5392 Clinical Pharmacy:** Supervised clinical rotation in the pharmacy of the Animal Health Center. Students participate in all activities in this unit.

**CVM 5420 Advanced Rotation in Radiology:** (Prerequisite: CVM 5224) Areas of study include advanced diagnostic imaging techniques including radiographic and ultrasound techniques and interpretation and use of radioisotopes in therapy. May be repeated for credit.

**CVM 5430 Advanced Rotation in Anesthesiology:** (Prerequisite: CVM 5434) Areas of study include pre-anesthetic patient evaluation, and advanced techniques in anesthetic induction, anesthetic maintenance, patient monitoring and post-anesthetic care. May be repeated for credit.

**CVM 5454 Advanced Rotation in Small Animal Surgery:** (Prerequisite: Consent of Instructor) Four hours practicum. Students assume primary responsibility for the receiving, diagnosis, treatment, and management of small animal surgery patients. May be repeated for credit.

**CVM 5460 Advanced Rotation in Equine Medicine & Surgery:** (Prerequisite: CVM 5266) 2-4 hours practicum. Students assume primary responsibility for the resolving, diagnosis, treatment, and management of equine patients. May be repeated for credit.

**CVM 5474 Advanced Rotation in Food Animal Practice:** (Prerequisite: CVM 5276) Students assume primary responsibility in problem analysis, case management and development of health maintenance programs of food animals. May be repeated for credit.

**CVM 5510 Veterinary Medicine/Animal Industry Externship 1:** Variable hour practicum. Supervised practice in clinical settings is gained through private industry and public institutions involving various species. Experiences may include small animals, laboratory animals, equine, exotics, poultry, swine, dairy, beef, or other commercial animal operations.

**CVM 5520 Veterinary Medicine/Animal Industry Externship 2:** Variable hour practicum. Supervised practice in clinical settings is gained through private industry and public institutions involving various species. Experiences may include small animals, laboratory animals, equine, exotics, poultry, swine, dairy, beef, or other commercial animal operations.

**CVM 5530 Veterinary Medicine/Animal Industry Externship 3:** Variable hour practicum. Supervised practice in clinical settings is gained through private industry and public institutions involving various species. Experiences may include small animals, laboratory animals, equine, exotics, poultry, swine, dairy, beef, or other commercial animal operations.

**CVM 5540 Veterinary Medicine/Animal Industry Externship 4:** Variable hour practicum. Supervised practice in clinical settings is gained through private industry and public institutions involving various species. Experiences may include small animals, equine, exotics, poultry, swine, dairy, beef, or other commercial animal operations.

**CVM 5550 Veterinary Medicine/Animal Industry Externship 5:** Variable hour practicum. Supervised practice in clinical settings is gained through private industry and public institutions involving various species. Experiences may include small animals, equine, exotics, poultry, swine, dairy, beef, or other commercial animal operations.

**CVM 5552 Veterinary Cardiology:** Emphasis is on the diagnosis, treatment, management, and prevention of diseases affecting the cardiovascular system of veterinary patients.

**CVM 5560 Advanced Clinical Rotation (ACR 1):**  Supervised rotation through one of the defined units of the Animal Health Center. Students assume primary responsibility for patient diagnosis and care. May be repeated for credit.

**CVM 5570 Advanced Clinical Rotation (ACR 2):** Supervised rotation through one of the defined units of the Animal Health Center. Students assume primary responsibility for patient diagnosis and care. May be repeated for credit.

**CVM 5580 Advanced Clinical Rotation (ACR 3):** Supervised rotation through one of the defined units of the Animal Health Center. Students assume primary responsibility for patient diagnosis and care. May be repeated for credit.

**CVM 5580 Large Animal Ambulatory Advanced Clinical Rotation (ACR):** Supervised clinical rotation through the Ambulatory/Large Animal Primary Care service. Students participate in large animal medicine and surgery in a field setting. May be repeated for credit.

**CVM 5602 Comparative Endocrinology:** An in-depth analysis including the pathophysiology, diagnosis, and treatment of endocrine disease in veterinary species with emphasis on small animal patients.

**CVM 5640 Shelter Medicine Spay/Neuter:** (Prerequisite: CVM 5246) This course provides in-depth understanding and practical experience in dealing with issues surrounding pet over- population, responsible pet ownership, shelter medicine and surgery.

**CVM 5652 Equine Podiatry:** Fundamentals of horseshoeing, anatomy, diseases of the equine digit, and therapeutic techniques.

**CVM 5662 Clinical Neurology:** Emphasizes basic procedures and concepts required to diagnose and manage neurologic diseases.

**CVM 5672 Veterinary Dentistry:** Emphasizes the diagnostic and therapeutic approach to dentistry in small animals and equine species.

**CVM 5682 Veterinary Ophthalmology:** Emphasizes the diagnosis and treatment of ophthalmic diseases.

**CVM 5692 Veterinary Business Management:** Lecture, group discussions, and focused independent study of the art and business of veterinary medicine. This course emphasizes non-technical veterinary skills.

**CVM 5702 Clinical Small Animal Hematology & Immunology:** Assessment of clinical diseases in small animal patients suffering from hematologic and immunologic disorders, with an emphasis on case management with interactive discussions.

**CVM 5714 Advanced Small Animal Dermatology:** Advanced study of small animal dermatology. Emphasis on disease conditions with primary impact on the integumentary system of small animals.

**CVM 5722 Small Ruminant Production Medicine:** Focuses on sheep and goat production. Experience in common surgical and treatment procedures are provided. Small ruminant production medicine topics and current literature review are discussed.

**CVM 5754 Advanced Small Animal Surgery:** Exercises to provide additional understanding and “hands-on” experience for students interested in orthopedic surgery, neurosurgery, plastic and reconstructive surgery, and other selected soft tissue procedures.

**CVM 5764 Advanced Equine Reproduction:** Emphasizes review of basic equine reproduction and exposure to advanced diagnostic and therapeutic modalities.

**CVM 5772 Advanced Canine Theriogenology:** Advanced study of canine reproduction. Review of basic diagnostics and procedures followed by an introduction to assisted reproductive technology (ART).

**CVM 5802 Practical Small Animal Oncology:** Practical clinical oncology at the general practice level to include an overview of individual disease behaviors and diagnostic techniques and an introduction to therapeutic modalities.

**CVM 5814 The Feline Patient:** Lectures, group discussions, and focused independent study on a variety of feline-related topics, with emphasis on medical problems which are unique to the cat.

**CVM 5842 Clinical Pharmacology:** Use of pharmacologic agents in the treatment of disease syndromes. Emphasis placed on therapeutic alternatives for the treatment of specific diseases or syndromes.

**CVM 5452 Small Animal Physical Rehabilitation:** Practical application of physical rehabilitation in the small animal patient.

**CVM 5854 Aquarium Health:** Concepts and techniques for the maintenance of common aquarium species. This course provides students opportunities to develop selected skills related to aquarium health.

**CVM 5862 Equine Surgery & Lameness:** Advanced study of equine lameness. Provides opportunities to develop and use problem-solving skills in the diagnosis, treatment, and management of lameness and related topics.

**CVM 5864 Bovine Production Medicine:** Reproductive and nutritional management, record-keeping, data analysis, herd health programs, and other advanced bovine production topics will be covered, building on student’s core veterinary education.

**CVM 5874 Bovine Theriogenology:**  Advanced study of bovine theriogenology. Review of basic diagnostics, surgical procedures, and obstetrics followed by an introduction to assigned reproductive technology (ART).

**CVM 5242 Small Animal Dermatology:** Advanced study of small animal dermatology. Emphasis on disease conditions with primary impact on the integumentary system of small animals.

**CVM 5882 Small Animal Gastroenterology:** Through lectures and case-based discussions and assignments, this elective will provide in-depth understanding of many gastrointestinal, hepatic, and pancreatic disorders in small animal patients.

**CVM 5990 Clinical Behavior Medicine:** Advanced study of clinical behavior of veterinary patients.  Emphasis on common behavioral issues and their management/treatment in the small animal patient.

**CVM 5990 Equine Clinical Nutrition:** In-depth information on the function and peculiarities of the equine gastrointestinal system allowing veterinarians to ensure the nutritional needs of horses are met.

**CVM 5990 Small Animal Clinical Nutrition:** In-depth information on the function of the canine and feline gastrointestinal system allowing veterinarians to provide and recommend proper diets for small animal patients.

**CVM 5990 Tropical Veterinary Medicine and One Health:** This course exposes students to tropical veterinary medicine in Uganda, a country with mostly rural veterinary practices. Emphasis is on One Health perspectives of tropical veterinary medicine and cultural emersion in international animal production, animal health, disease surveillance, public health systems, and food safety.