634  Endocrinology Clerkship
Spring. 3 credits. R: Completion of semester 5 of the graduate-professional program in the College of Veterinary Medicine. R: Open to graduate-professional students in the College of Veterinary Medicine. SA: PTH 634
Principles of endocrinology and diagnosis of endocrinology disorders. Case review and interpretation.

635  Special Problems in Histopathology and Cytology Clerkship
Summer. 3 credits. R: PDI 630 R: Completion of semester 5 of the professional program in the College of Veterinary Medicine. R: Open to graduate-professional students in the College of Veterinary Medicine. SA: PTH 635
Study of the histopathology and clinical cytology of various diseases of veterinary importance.

636  Aquatic Animal Medicine Clerkship
Spring. 3 credits. R: Completion of semester 5 of the graduate-professional program in the College of Veterinary Medicine. R: Open to graduate-professional students in the College of Veterinary Medicine. SA: PTH 636
Clinical, laboratory, and ecological principles of disease of aquatic organisms with special emphasis on impacts and management. Critical analysis and review of selected case studies and disease control regimen.

637  Poultry Medicine Clerkship
Fall. 3 credits. R: Completion of semester 5 of the graduate-professional program in the College of Veterinary Medicine. R: Open to graduate-professional students in the College of Veterinary Medicine. SA: PTH 637
Diagnosis, treatment, and prevention of viral, bacterial, parasitic, fungal, and nutritional diseases of commercial poultry. Biosecurity principles, insect and rodent control, and the proper selection and use of disinfectants. Field trips required.

804  Molecular and Developmental Neurobiology
Fall. 3(3-0) Interdepartmental with Neuroscience and Pharmacology and Toxicology and Psychology and Integrative Biology. R: Bachelor’s degree in a Biological Science or Psychology. R: Open to graduate students in Neuroscience major.
Nervous system specific gene transcription and translation: Maturation, degeneration, plasticity, and repair in the nervous system.

816  Integrative Toxicology: Mechanisms, Pathology and Regulation
Fall of odd years. 3(3-0) Interdepartmental with Animal Science and Biochemistry and Molecular Biology and Pharmacology and Toxicology. Administered by Pharmacology and Toxicology. P: PHM 819

830  Concepts in Molecular Biology
Fall, Spring. 2(2-0) Interdepartmental with Biomedical Laboratory Diagnostics. Administered by Biomedical Laboratory Diagnostics. R: One course in biochemistry or concurrently. SA: MT 830
Techniques and theories of molecular biology, nucleic acid synthesis and isolation, enzymatic digestion and modification, electrophoresis, hybridization, amplification, library construction, and cloning.

851  Advanced General Pathology
Fall of even years. 3(3-0) R: Approval of department. SA: PTH 851
Fundamental concepts of cell injury, inflammation, and oncogenesis. Mechanisms of disease.

853  Advanced Systematic Pathology
Spring of odd years. 3(0-6) R: Approval of department. SA: PTH 853
Pathological aspects of the nervous, endocrine, cardiovascular, respiratory, urinary, genital, musculoskeletal, integumentary, and special sense systems.

854  Advanced Clinical Pathology
Fall of odd years. 2(2-0) R: Doctor of Veterinary Medicine degree. R: Approval of department. SA: PTH 854
Hematology, including anemias, leukocyte responses and hemostasis. Evaluation of clinical chemistry, urinalysis, and endocrinology.

855L  Advanced Clinical Pathology Laboratory
Fall of odd years. 1(0-2) R: Doctor of Veterinary Medicine degree. R: Approval of department. SA: PTH 855L
Clinical pathology laboratory techniques including sample preparation and examination of blood smears and cytologic preparations.

858  Pathology of Avian Diseases
Spring of even years. 2(2-0) R: Approval of department. SA: PTH 858
Disease and pathology affecting domestic poultry, pet birds, and wild birds.

859  Avian Histopathology Laboratory
Spring of even years. 1(0-2) R: Approval of department. SA: PTH 859
Recognition and description of microscopic lesions of avian diseases.

870  Laboratory Animal Pathology
Summer of even years. 2(1-2) R: Background in histopathology, veterinary medicine, and systemic pathology R: Approval of department.
Diseases and pathology of laboratory animal species including mice, rats, ferrets, rabbits, primates, and fish, including current use of laboratory animals for toxicological pathology in industry.

890  Problems in Veterinary Pathology
Fall, Spring, Summer. 1 to 12 credits. A student may earn a maximum of 12 credits in all enrollments for this course. R: Approval of department. SA: PTH 890
Faculty supervised work on an experimental, theoretical, or applied problem in veterinary pathology.

891  Problems in Pathobiology
Fall, Spring, Summer. 1 to 12 credits. A student may earn a maximum of 12 credits in all enrollments for this course. R: Approval of department. SA: PTH 891
Faculty supervised work on an experimental, theoretical, or applied problem in pathobiology and diagnostic investigation.

892  Pathology Seminar
Fall, Spring. 1(1-0) A student may earn a maximum of 3 credits in all enrollments for this course. R: Approval of department. SA: PTH 892
Presentation and discussion of current topics in pathology by graduate professional students, faculty, or outside speakers.

893  Pathology Case Discussion Seminar
Fall, Spring. 1(1-0) A student may earn a maximum of 6 credits in all enrollments for this course. R: Open to graduate students or lifelong graduate students in the Department of Pathobiology and Diagnostic Investigation. Approval of department. SA: PTH 893
Utilization of a group of theme-based veterinary cases to train pathology residents and graduate students in diagnostic pathology.

894  Diagnostic Histopathology of Neoplastic Diseases of Domestic Animals
Spring of even years. 3(2-2) R: Approval of department.
Histologic diagnosis of neoplastic diseases of domestic animals, including prognostic criteria, grading systems, and ancillary techniques to aid in diagnosis and prognosis.

899  Master's Thesis Research
Fall, Spring, Summer. 1 to 10 credits. A student may earn a maximum of 10 credits in all enrollments for this course. R: Open to master's students in the Department of Pathobiology and Diagnostic Investigation. Approval of department. SA: PTH 899
Master’s thesis research.

901  Investigating the Lung
Fall of even years. 2(2-0) Interdepartmental with Large Animal Clinical Sciences and Physiology. Administered by Large Animal Clinical Sciences. R: Open to graduate students.

999  Doctoral Dissertation Research
Fall, Spring, Summer. 1 to 24 credits. A student may earn a maximum of 36 credits in all enrollments for this course. R: Open to doctoral students in the Department of Pathobiology and Diagnostic Investigation. Approval of department. SA: PTH 999
Doctoral dissertation research.