633. Transfusion Medicine  
Fall, Spring. 3 credits.  
R: Completion of 5 semesters of the graduate-professional program in the College of Veterinary Medicine. Management of blood donors, blood banking, and cross match technologies. Administration of blood components. Blood typing in large and small animals.

812. Advanced Clinical Chemistry  
Spring of even-numbered years. 2(2-0) Interdepartmental with Medical Technology. Administered by Medical Technology.  
P: BCH 462, MT 414, MT 416.  
Biochemical basis of selected pathologic conditions including inborn errors of metabolism, endocrine and other genetic disorders. Emphasis on current diagnostic techniques.

820. Advanced Human Hematology  
Fall of even-numbered years. 2(2-0) Interdepartmental with Medical Technology. Administered by Medical Technology.  
P: MT 422.  
Selected topics in hematology including pathogenesis, mechanisms and morphological pictures. Emphasis on laboratory tests and interpretation of results.

830. Concepts in Molecular Biology  
Spring of odd-numbered years. 2(2-0) Interdepartmental with Medical Technology. Administered by Medical Technology.  
P: One course in Biochemistry or concurrently. Techniques and theories of molecular biology, nuclear acid synthesis and isolation, enzymatic digestion and modification, electrophoresis, hybridization, amplification, library construction, and cloning.

840. Advanced Hemostasis  
Fall of odd-numbered years. 2(2-0) Interdepartmental with Medical Technology. Administered by Medical Technology.  
P: BCH 462, MT 422.  
Physiology, pathophysiology, and laboratory evaluation of hemostatic disorders.

851. Advanced General Pathology  
Fall of even-numbered years. 3(3-0)  

852. Advanced General Pathology Laboratory  
Fall of even-numbered years. 1 credit.  
P: PTH 851 concurrently.  
Histopathologic and ultrastructural study of general morphologic patterns of inflammation cell injury and neoplasia.

853. Advanced Systemic Pathology  
Spring of odd-numbered years. 4(3-2)  
R: Approval of department. Pathological aspects of the nervous, endocrine, cardiovascular, respiratory, urinary, genitai, musculoskeletal, integumentary and special sense systems.

854. Advanced Clinical Pathology  
Spring of even-numbered years. 3(3-0)  
P: PTH 540, PTH 552, PTH 609, PTH 651. R: Approval of department.  
Hematology including anemias, leukocyte responses and hemostasis. Clinical chemistry including tests to evaluate organs.

855. Proseminar  
Fall of odd-numbered years. 2(2-0)  

856. Pathoanatomy  
Summer of odd-numbered years. 3(3-0)  
R: Approval of department. Pathologic changes in tissues of animals used in toxicologic studies. Clinical pathologic assessments. Gross, histologic, and ultrastructural changes in organ systems.

857. Correlative Diagnostic Pathology  
Fall, Spring, Summer. 3 credits.  
R: Approval of department. Diagnosis of animal diseases by necropsy, biopsy, or clinical pathology. Correlation of diagnostic test results with history, laboratory data and morphologic findings. Compilation and formal presentation of findings.

858. Pathology of Avian Diseases  
Spring of even-numbered years. 2(2-0)  
C: Pathology students must take PTH 859 concurrently.  
R: Approval of department. An overview of disease and pathology affecting domestic poultry, pet birds, and wild birds.

859. Avian Histopathology Laboratory  
Spring of even-numbered years. 1 credit.  
P: Pathology students must take PTH 858 concurrently. R: Approval of department. Recognition and description of microscopic lesions of avian diseases.

860. Clinical Laboratory Diagnosis of Infectious Diseases  
Spring of even-numbered years. 2(2-0) Interdepartmental with Medical Technology. Administered by Medical Technology.  

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

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

863. Pathology Seminar  
Fall, Spring, Summer. 1 to 12 credits. A student may earn a minimum of 6 credits in all enrollments for this course.  
P: PTH 855, PTH 856. R: Open only to graduate-professional students in the College of Veterinary Medicine. Approval of department. Experimental, theoretical, or applied problems under faculty direction.

864. Directed Studies  
Fall, Spring, Summer. 1 to 30 credits. A student may earn a maximum of 15 credits in all enrollments for this course.  
R: Interdepartmental with Family Practice and Medicine. Administered by Pathology.  
P: PTH 600. R: Open only to graduate-professional students in College of Human Medicine. Continuous and comprehensive patient care under supervision of appropriate physicians.

865. 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.  
P: PTH 855, PTH 856, PTH 859. R: Approval of department. Presentation and discussion of current topics in pathology by departmental graduate students, faculty or outside speakers.

866. 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.  
P: Admission to doctoral program in Pathology.

PEDIATRICS  
Department of Pediatrics  
College of Osteopathic Medicine  

599. Special Problems in Pediatrics  
Fall, Spring, Summer. 1 to 24 credits. A student may earn a maximum of 48 credits in all enrollments for this course.  
P: Open only to graduate-professional students in the College of Osteopathic Medicine. Approval of department.  
R: Open only to graduate-professional students in the College of Osteopathic Medicine. Approval of department. Experimental, theoretical, or applied problems under faculty direction.

599. Pediatrics Clerkship  
Fall, Spring, Summer. 1 to 36 credits. A student may earn a maximum of 54 credits in all enrollments for this course.  
P: PTH 600. R: Open only to graduate-professional students in the College of Osteopathic Medicine. Approval of department.  
R: Open only to graduate-professional students in the College of Osteopathic Medicine. Approval of department. Experimental, theoretical, or applied problems under faculty direction.

599. Directed Studies  
Fall, Spring, Summer. 1 to 30 credits. A student may earn a maximum of 15 credits in all enrollments for this course.  
P: PTH 600. R: Open only to graduate-professional students in the College of Osteopathic Medicine. Approval of department.  
R: Open only to graduate-professional students in the College of Osteopathic Medicine. Approval of department. Study in general or specialty pediatrics.

PEDIATRICS AND HUMAN DEVELOPMENT  
PHD  
Department of Pediatrics and Human Development  
College of Human Medicine  

523. Genetics for Medical Practice  
Summer. 1(1-0) Interdepartmental with Biochemistry.  
P: Open only to graduate-professional students in colleges of Human and Osteopathic Medicine.  
R: Graduate professional students in College of Human Medicine. Basic principles of genetics for medical students.

524. Genetics Clinic  
Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course.  
P: PHD 522. R: Graduate professional students in colleges of Human and Osteopathic Medicine.  
R: Graduate professional students in colleges of Human and Osteopathic Medicine. Role of genetics in health care delivery under the direction of a faculty member.

591. Special Problems in Human Development  
Fall, Spring, Summer. 1 to 8 credits. A student may earn a maximum of 12 credits in all enrollments for this course.  
P: Open only to graduate-professional students in the College of Human Medicine. Approval of department.  
R: Open only to graduate-professional students in the College of Human Medicine. Approval of department. Experimental, theoretical, or applied problems under faculty direction.

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