848. Recreation Resource Law
Spring. 3(3-0)
Legal basis for public recreation. Methods of acquiring recreational resources, including contractual and condemnation procedures. Administrative problems, including zoning, liability, civil rights and law enforcement. Study of cases and statutes.

880. Special Problems
Fall, Winter, Spring, Summer. 1 to 6 credits. May re-enroll for a maximum of 10 credits. Approval of department.
Seminars on current problems. Supervised readings. Independent study of selected topics.

899. Research
Fall, Winter, Spring, Summer. Variable credit. Approval of department.

PATHOLOGY

College of Human Medicine
College of Osteopathic Medicine
College of Veterinary Medicine

404. General Pathology
Fall, Winter, Spring. 3(3-0) ANT 429, Junior Medical Technology majors, or approval of department.

407. Clinical Pathology
Fall, Winter, Spring. 4(3-4) 404 or approval of department.
Theory and techniques in hematology, coagulation, blood banking, clinical microscopy and chemical pathology, including urinalysis, blood chemistry and continuous flow analysis.

409. Clinical Pathology
Spring. 3(3-4) 404 or approval of department.
Continuation of 407.

501. Pathology of Infancy and Childhood
Winter. 5(3-4) Year V Human Medicine Students.
An analysis of disease processes in the immature human between birth and puberty.

550. Veterinary Pathology I
Spring. 6(3-6) Admission to the professional veterinary program, or approval of department.
Principles of pathology, including causes of disease, disturbances of cell growth and metabolism, nervous, circulatory changes, inflammation and neoplasms; introduction to clinical hematology.

560. Pathology II
Winter, Summer. 7(4-8) 550.
Continuation of 550, with coverage of the hematopoietic, cardiovascular, urinary, digestive, respiratory and reproductive systems; integration of principles of clinical pathology.

610. Veterinary Clinical Pathology
Fall, Spring. 2(2-3) 550.
Laboratory procedures in the diagnosis and prognosis of animal disease; examination of body tissues, fluids and excreta.

615. Diseases of Poultry
Winter, Summer. 4(4-0) Eight-term Veterinary Medicine students.
Etiology, signs, lesions, differential diagnosis and control of infectious and noninfectious diseases of birds, with emphasis on domestic poultry.

620. Human Pathology I
Fall. 5(4-2) Medical school Sophomores or approval of department.
Recognition and classification of gross and microscopic structural changes in disease, analysis of functional consequences, and correlation with clinical manifestations.

621. Human Pathology II
Winter. 5(4-2) 620.
Continuation of 620.

622. Principles of Laboratory Medicine
Spring. 5(4-2) 621.
Study of diseases, the diagnosis and management of which rely on laboratory methods; hematologic, endocrine, metabolic, and infectious diseases are included.

800. Problems in Pathology
Fall, Winter, Spring, Summer. 1(1-0) May re-enroll for a maximum of 3 credits for M.S. candidates and 6 credits for Ph.D. candidates. Approval of department.
Elective work for students in veterinary medicine interested in pathology as a specialty, or in the special pathology of diseases of a particular class or species, and for graduate minors and majors interested in pathologic techniques or in non-thesis research.

801. Pathology Seminar
Fall, Winter, Spring, Summer. 1(1-0) May re-enroll for a maximum of 3 credits for M.S. candidates and 6 credits for Ph.D. candidates. Approval of department. Seminar required of all majors in Pathology.

802. Advanced Histopathology
Fall. 5(0-0) Approval of department.
A relatively advanced and comprehensive study in the histopathologic aspects of systemic and special pathology; independent study in the field of pathogenesis and microscopic pathology.

803. Advanced Histopathology
Winter. 5(0-0) 802 and approval of department.
Continuation of 802.

804. Histopathologic Techniques
Fall. 5(3-6) Approval of department.
Theory and practice in preparation of tissues for examination with the light microscope; special stains and histochemical procedures included.

805. Pathology Proseminar
Fall. 2(3-0) Approval of department.
Discussion of basic problems in pathology and methods of research; seminars in pathology; preparation of research reports; literature review; preparation and presentation of research data; practical assignments.

810. Post-Mortem Diagnosis
Eighth-term Veterinary Medicine students. 3(3-0) 809. May re-enroll for a maximum of 6 credits. Approval of department. Required of majors.
Instruction and practice in diagnosis of animal diseases by means of necropsy and other laboratory techniques. Emphasis will be placed upon correlation and interpretation of gross and microscopic lesions and the results of other tests.

811. Advanced Clinical Pathology
Winter. 3(1-8) Approval of department.
Application of standard and newer techniques and instruments in hematology, biochemistry, parasitology, etc., to the diagnosis of disease.

512. Hematology
Winter. 5(3-4) 408 or 610 or approval of department.
Pathology of diseases of blood and an analysis of diagnostic laboratory procedures.

820. Oncology
Spring. 3(6-0) Approval of department.
A study of benign and malignant neoplasms with emphasis on gross and microscopic characteristics and diagnosis.

826. Laboratory Animal Pathology
Spring. 4(3-3) Graduate status and approval of department. Interdepartmental and administered by Laboratory Animal Resources.
Macro and microscopic studies on the diseases of laboratory animals with special emphasis on naturally-occurring diseases which might interfere with the interpretation of experimental results.

899. Research
Fall, Winter, Spring, Summer. Variable credit. Approval of department.

910. Biology of Disease
Fall. 3(2-3) Approval of department. Primarily for students in the biological sciences.
Basic morphologic changes in disease with emphasis on the related pathologic pathology. Laboratory includes relevant problems in postmortem diagnosis.

980. Histopathologic Diagnosis
Fall, Winter, Spring. 3(0-9) May re-enroll for a maximum of 6 credits. 802, 820. Terminology, histopathologic examination, description, diagnosis and reporting of specimens from biopsy and necropsy.

990. Advanced Correlative Pathology
Fall, Winter, Spring. 5(0-15) May re-enroll for a maximum of 15 credits. Approval of department. Experience in morphologic and clinical pathology and correlation of these with the clinical aspects of disease.

999. Research
Fall, Winter, Spring, Summer. Variable credit. Approval of department.

PHARMACOLOGY

College of Human Medicine
College of Osteopathic Medicine
College of Veterinary Medicine

350. Introductory Human Pharmacology
Spring. 3(3-0) PSL 332 or concurrently; or approval of department.
Survey of pharmacology including general principles, central nervous system drugs, autonomic nervous system drugs, cardiovascular and renal drugs, endocrine drugs, anti-infectives, poisoning therapy, and other basic related topics.

430. Drug Abuse
Fall. 3(3-0) Juniors and approval of department. Biology and chemistry recommended.
Actions, mechanism of action, toxicity and use of drugs of abuse. Sociological and psychological aspects of drug abuse and the legal aspects of the sale and distribution of drugs are considered.

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