COMPARATIVE BIOMEDICAL SCIENCES • CBS

7001 Seminar: Comparative Biomedical Sciences (1) F,S *May be taken for a max. of 8 hrs. of credit.* Reports and discussions on topics of current interest in various scientific disciplines.
7002 Research Techniques in Comparative Biomedical Sciences (1-4) F,S,Su *May be taken for a max. of 8 hrs. of credit when topics vary.* Specialized research techniques related to selected scientific disciplines in the department.
7003 Special Topics in Comparative Biomedical Sciences (1-4) F,S,Su *May be taken for a max. of 8 hrs. of credit when topics vary.* Specialized coverage of a variety of topics related to selected scientific disciplines in the department.
7104 Biomedical Cell and Molecular Biology (3) F,S *Prereq.: consent of instructor.* Essential concepts of cell and molecular biology; cellular ultrastructure and function; basic genetic mechanisms in normal and transformed cells; methods of gene analysis; proteomics; molecular therapy and molecular approaches to disease diagnosis.
7105 Ultrastructural Cytology (3) S *Prereq.: consent of instructor. 2 hrs. lecture; 2 hrs. lab.* Fine structure of animal cells and cell products; relationships of ultrastructure to function; interpretation of cytochemical reactions.
7106 Biomedical Electron Microscopy (4) F,S *Prereq.: consent of instructor. 1 hr. lecture; 8 hrs. lab.* Preparation of tissues including biopsies for transmission and scanning electron microscopy; operation of SEMs, TEMs, and ancillary equipment.
7108 Critical Analysis in Molecular Biology/Medicine (3) F Instruction/participation; formal presentations of research data. Discussion and presentations are drawn from landmark biomedical publications.
7109 Advanced Macroscopic Anatomy (1-3) *Prereq.: consent of instructor. May be repeated for credit when topics vary.* Specialized dissection of one or more of the following: dog, horse, ruminants, laboratory, exotic, or avian species.
7112 Advanced Microscopic Anatomy (1-3) *Prereq.: consent of instructor. May be repeated for credit when topics vary.* Comparative or systemic microscopic anatomy of selected organs or organ systems of domestic, laboratory, or exotic species.
7603 Clinical Toxicology (3) S *Prereq.: consent of instructor.* Pathophysiology of various clinically important toxicants; prevention, diagnosis, and treatment of common intoxications in domestic animals.
7614 Central Nervous System (3) V *Prereq.: CBS 7631 or equivalent.* Neurotransmitter mechanisms, chemistry, and anatomical distribution; neuropharmacology; synaptic physiology and anatomy of selected brain regions; central nervous system diseases.
7615 Pulmonary Pharmacology (3) V *Prereq.: CBS 7630.* Mechanisms of action and applications of various drugs used in respiratory disorders.
7617 Autonomic Nervous System (3) *Prereq.: CBS 7631 or equivalent.* Structure, physiology, pharmacology, and diseases of the autonomic nervous system.
7622 Fundamentals of Carcinogenesis (3) F,S *Prereq.: CBS 7603 or consent of instructor. Same as BIOL 7622 and ENVS 7622.* Identification and chemical structural features of carcinogens; role of free radicals in biology and pathobiology; molecular mechanisms in chemical carcinogenesis, including pathways for metabolic activation, DNA adduction, somatic cell mutagenesis, and oncogene activation.
7627 Mechanisms of Toxicity in Aquatic Animals (4) F-V *Prereq.: organic chemistry, biochemistry, and physiology recommended.* Examination of mechanisms of contaminant toxicity in context with the unique physiological, biochemical, and structural features of aquatic animals and the environment.
7628 Biomedical Physiology I (3) F,S *Prereq.: consent of instructor.* Physiological mechanisms underlying the cardiovascular and gastrointestinal systems of domestic species.
7629 Biomedical Physiology II (3) F,S *Prereq.: consent of instructor.* Physiological mechanisms underlying the respiratory and renal systems of domestic species; emphasis on system control.
7630 Biomedical Pharmacology (4) F,S *Prereq.: vertebrate physiology, biochemistry, or equivalent; consent of instructor. 3.5 hrs. lecture; 0.5 hrs. lab.* Comparative study of the pharmacodynamics, disposition, kinetics, and therapeutic utility of drugs in animals.
7631 Biomedical Neuroscience (3) F, S *Prereq.: consent of instructor. 2.5 hrs. lecture; 0.5 hrs. lab.* Physiological and anatomical mechanisms underlying the nervous system.
7699 Toxicology Seminar (1) *Also offered as BIOL 7699, FDSC 7699, CHEM 7699, and ENVS 7699. May be taken for a max. of 4 hrs. credit when topics vary.* Reports and discussions on topics of current interest in the discipline of toxicology.