Reports and discussions on topics of current interest in the discipline of toxicology.

May be taken for a max. of 4 hrs. of credit. Reports and discussions on topics of current interest in various scientific disciplines.

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.

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.

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.

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.

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.

Pathophysiology of various clinically important toxicants; prevention, diagnosis, and treatment of common intoxications in domestic animals.

Neurotransmitter mechanisms, chemistry, and anatomical distribution; neuropharmacology; synaptic physiology and anatomy of selected brain regions; central nervous system diseases.

Mechanisms of action and applications of various drugs used in respiratory disorders.

Structure, physiology, pharmacology, and diseases of the autonomic nervous system.

Biochemical systems from various invertebrate, vertebrate, and plant species involved in the metabolic activation and detoxification of xenobiotic substances; use of these systems as biomonitors of pollution impact.

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.

Fundamental principles of toxicology, dose response relationship, design and conduct of acute and chronic toxicity tests, basic analytical toxicology, biochemical markers, basic principles of hazard evaluation and risk assessment, industrial toxicology, principles of toxicology applied to the environment and ecosystems.

Continuation of CBS 7623 (ENVS 7623). Also offered as BIOL 7624, ENVS 7624. Xenobiotic transport, distribution, toxicokinetics, metabolism, excretion, and principles of receptor interaction.

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.

Specialized research related to selected scientific disciplines in the department.

Specialized research related to selected scientific disciplines in the department.

Specialized coverage of a variety of topics related to selected scientific disciplines in the department.

Specialized coverage of a variety of topics related to selected scientific disciplines in the department.

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