

PATHOLOGY

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Courses given in Pathology have the subject code PATH. For a complete list of subject codes, see Appendix B.

PROGRAMS OF STUDY

The Department of Pathology offers a sequence of basic courses in general and special pathology, including neuropathology, which is open to medical students only. Interested and qualified graduate students may petition the course director to audit the lecture portion of these courses. In addition, there are a number of advanced courses in selected aspects of pathology. The department does not offer advanced degrees in pathology, but qualified graduate students who are admitted to the Biophysics Program, the Cancer Biology Program, or other interdepartmental programs may elect to pursue their thesis requirements in the research laboratories of the Department of Pathology. The discipline of pathology has traditionally served as a bridge between the preclinical and clinical sciences and is concerned with the application of advances in the basic biological sciences, both to the diagnosis of disease in man and to the elucidation of the mechanisms of normal molecular, cellular, and organ structure and function that manifest themselves in clinical disease. Accordingly, the department's research interests encompass a broad range that extends from fundamental molecular biology to clinical-pathological correlations, with a primary emphasis on experimental oncology.

At present, investigation in the department includes basic studies in different areas utilizing molecular biological, biochemical, and genetic cell biological techniques: DNA replication in yeast and cultured eukaryotic cells, cell cycle control in animal cells and yeast, identification and pathogenetic role of chromosomal aberrations in human malignancies and mechanisms of activation of oncogenes in human and animal cells, lymphocyte and neutrophil-interactions with endothelial cells, cell type specification and signal transduction pathways leading to specific gene

expression or modulation of cytoskeletal behavior; cytoskeletal architecture, cell-matrix interaction, developmental biology of hematopoietic stem cells and thymus, regulation of the immune system, and mechanisms of immune and other responses in the central nervous system. In addition, a variety of studies focus on the development of novel diagnostic and immunotherapeutic treatment modalities and techniques for solid tumors, lymphomas, HIV, and genetic diseases. Research training in all of these areas is available for qualified medical and graduate students by individual arrangement with the appropriate faculty member. A summary of the research interests of the department faculty is available on request.

COURSES

Course and lab instruction in the Department of Pathology conforms to the "Policy on the Use of Vertebrate Animals in Teaching Activities," the text of which is available at <http://www.stanford.edu/dept/DoR/rph/8-2.html>.

PATH 105Q. Final Analysis: The Autopsy as a Tool of Medical Inquiry—Stanford Introductory Seminar.

3 units, Spr (Regula)

PATH 199. Undergraduate Research

1-18 units, Aut, Win, Spr (Staff)

PATH 211. Advanced Immunology I—(Enroll in MI 211, IMMUNOL 201.)

3 units, Win (Chien, Staff)

PATH 215. Molecular Mechanisms of Disease—Provides graduate students in the basic sciences with an exposure to current research topics in human disease. Each week, one scientist from academia or industry presents a seminar on the pathogenesis of a particular disease, with an emphasis on molecular approaches, followed by a discussion. A review article and one or two research papers from the current literature are assigned prior to each meeting.

1 unit, Win (Lipsick, Staff)

PATH 220. Immunology for Medical Students—(Same as IMMUNOL 200, MI 200; medical students register for MI 200 only.) The basic concepts of immunology and the role of the immune system in a variety of diseases, utilizing case presentations of diseases including autoimmune diseases, infectious disease, transplantation, immunodeficiency diseases, hypersensitivity reactions, and allergic diseases. Weekly problem sets based on case reports and publications drawn from the clinical literature. Emphasis is on application of the fundamental concepts of immunology.

4 units, Win (Lewis, Staff)

PATH 230A,B,C. General and Special Pathology—Three quarter introduction to principles in general pathology and a detailed pathology of human disease based on the disordered structure and function of individual organ systems (special pathology). Lecture and lab discussion groups. Course director: Regula.

PATH 230A. General and Special Pathology

1-6 units, Spr (Regula, Staff)

PATH 230B. General and Special Pathology

6 units, Aut (Regula, Lombard, Staff)

PATH 230C. General and Special Pathology

0-6 units, Win (Regula, Staff)

PATH 299. Directed Reading—Prerequisite: consent of faculty member.

1-18 units, Aut, Win, Spr, Sum (Staff)

PATH 399. Research—Department faculty are involved in active research programs at the Stanford Medical Center. Students interested in research at the molecular, cellular, and clinical-pathologic levels are encouraged to seek out faculty advisers. The department is equipped for modern research and maintains an active postdoctoral research training program. Prerequisite: consent of instructor.

1-18 units, Aut, Win, Spr, Sum (Staff)