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Independent Study Program

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Graduate Study, The Graduate Group in Immunology offers an interdisciplinary program of study in an exciting field of biology and medicine leading to the M.S. and Ph.D. degrees. Participating faculty from various Schools and Departments at UC Davis provides research opportunities in diverse areas of applied immunology. Areas of focus include infection and immunity (including host response regulation to parasites, viruses and bacteria); nutrition and immunity; autoimmunity, immune regulation, innate immunity, cancer therapy and immune mediators and their uses for diagnosis and treatment.

Preparation, Applicants for candidacy to these programs should have completed undergraduate preparation in mathematics, physics, chemistry, biochemistry, molecular and cellular biology or related biological and medical sciences.

For work leading to the Ph.D. degree, the requirements include cell biology, chemical immunology, cellular immunology, immunohematology, and advanced immunology. In addition to these general requirements, more specialized preparation in at least one of the following is required: (a) microbiology (specifically bacteriology, virology, parasitology, medical microbiology); (b) zoological specialties (cell biology, endocrinology, embryology, protozoology, histology, cytology, physiology); (c) medical specialties (anatomy, pharmacology, clinical pathology, reproduction, hematopathology, epidemiology); (d) biochemistry/biophysics specialties (biologically active molecules, control mechanisms); (e) genetic specialization (developmental genetics, population genetics, cytogenetics, molecular genetics).

Graduate Adviser, See the graduate program website at http://immunology.commed.ucdavis.edu/people/.

Courses in Immunology (IMM)

Additional courses are available and listed under the individual sponsoring departments. Contact the Group Office for information.

Graduate

201. Introductory Immunology (4)
Lecture—4 hours. Prerequisite: graduate standing. Enrollment limited to 30 students. Comprehensive introduction to the principles of immunology.—F. (F. Miller)

201L. Advanced Immunology Laboratory Rotations (4)
Laboratory/discussion—12 hours. Laboratory assignment in two research laboratories. Individual research problems with emphasis on methodologi-cal/procedural experience and experimental design. Student writes a project outline and gives oral presentations which may be repeated two times for credit. (S/U grading only).—F. (F.) McSorley

202L. Advanced Immunology Laboratory Rotations (5)
Laboratory/discussion—15 hours. Laboratory assignment in two research laboratories. One four-week and one six week assignment in immunology research laboratories. Individual research problems with an emphasis on methodological/procedural experience and experimental design. May be repeated two times for credit. (S/U grading only).—W. (W.) McSorley

203. Cancer Immunology (2)
Lecture—1 hour; term paper. Covers concepts in cancer biology, progression and immune evasion. It will also cover topics such as: immune surveillance, immune effector mechanisms and current concepts in immune therapy. Offered in alternate years.—S. Murphy

204. Topics in Innate Immunity (2)
Extensive writing or discussion—1 hour; performance instruction—1 hour. Prerequisite: course 201 or equivalent; course 293 preferred. Restricted to first- or second-year GGI and MGG students; others with permission of instructor; enrollment limited to 18 students. Covers current topics in the field of innate immunity through student seminar presentations and critical evaluation of the literature. Concepts include: pathogen recognition, intercellular communication, specialized cellular function and effector/signaling molecules. Offered in alternate years.—S. Bevins

210. Topics on Neuroimmunology and Neuroinflammation (1)
Seminar—1 hours. Prerequisite: consent of instructor. Topics will include a broad range of frontiers in neuroimmunology and neuroinflammation. Research articles in current literature will serve to guide in-depth discussions of experimental approaches, technical aspects of experimental techniques, data interpretation, and other relevant aspects of each topic. (S/U grading only).—F. (F.) Soulika

292. Immunoendoctrine Seminar (2)
Seminar—2 hours. Prerequisite: graduate standing. Seminar presentations dealing with principles of xenobiotic effects on immune system function and specific examples of drugs and environmental chemicals exerting toxic effects on the immune system. (S/U grading only)

293. Current Concepts in Immunology (4)
Lecture/discussion—4 hours. Prerequisite: Pathology, Microbiology, and Immunology 126 or consent of instructor.rends and current concepts in the literature. —W. (W.) Baumgarth

294. Comparative Clinical Immunology (4)
Lecture/discussion—4 hours. Prerequisite: Pathology, Microbiology, and Immunology 126 or consent of instructor. Clinical immunology in animals and man. Pathogenesis of representative infectious diseases, hypersensitive reactions, and autoimmunity. Emphasis on specific and nonspecific immune effector mechanisms to combat infections or mediate pathology. Not open for credit to students who have completed course 294A. Offered in alternate years.—G. (G. Ellis)

295. Cytokines (3)
Lecture—2 hours; discussion—1 hour. Prerequisite: course 293 or consent of instructor. Cytokines and their involvement in human and animal physiology/disease, molecular mechanisms, and receptor signalling. Immune and non-immune actions. Overlapping/redundant functions (referred to as the “cytokine network”).

296. Advanced Topics in Immunology (2)
Seminar—2 hours. Prerequisite: graduate standing or consent of instructor. Presentation, discussion, and analysis of faculty research topics in immunology.

Required for Immunology Graduate Students every year until they have passed their qualifying exam. May be repeated for credit. (S/U grading only).—F. (F.) Maversik

297. Mucosal Immunology (2)
Lecture—1 hour; discussion—1 hour; term paper. Prerequisite: course 201 or equivalent. Basic concepts and current research topics in the field of mucosal immunology, with an emphasis on human immunology. Major emphasis includes innate and adaptive mucosal immunity, the gastrointestinal tract, the lung, lymphocyte trafficking, and mucosal vaccination. Offered in alternate years.—W. (W.) Shacklett

Independent Study Program

Information, Chairperson, Committee on Courses of Instruction, c/o Academic Senate Office 530-752-2231
The Independent Study Program provides an opportunity for upper division students to design and pursue a full quarter (12-15 units) of individual study in an area of special interest. A program qualifying as Independent Study will consist of one or more courses in the 190–199 series. While the theme of such a program may be reasonably broad, a recognizable common thread should unite all the academic work you undertake during an independent study quarter. Regularly offered formal courses will only be acceptable as a part of such a program if they clearly fit its theme and contribute something essential toward the realization of its objectives. The program is not to be considered a way to take more variable-unit courses than normally permitted.

The procedure for enrolling in an Independent Study Program is as follows:

1. Develop, in general terms, a plan of study;
2. Locate a faculty sponsor or panel of sponsors and with their help and approval develop a detailed plan;
3. Complete a project proposal form (obtained from the Academic Senate office) and submit it to the Academic Senate Committee on Courses of Instruction.

The deadline for applications is the tenth day of instruction of the term before; see the Academic Calendar, page 1, for specific dates.

You must report the completion or termination of the project to the Committee on Courses of Instruction.

Individual Major

[College of Agricultural and Environmental Sciences, College of Biological Sciences, and College of Letters and Science]

The Major Program

The Individual Major, an integrated program composed of courses from two or more disciplines, is designed by the student and is subject to approval by faculty advisers and appropriate college committees. This major enables a student to pursue a specific field of study not otherwise accommodated within the framework of an existing major. It must clearly and specifically meet the student's educational goals as well as meet university and college academic standards.

College of Agricultural and Environmental Sciences

The Individual Major in this College has been suspended indefinitely.

Program Office, 150 Mrak Hall 530-752-0108 http://www.caes.ucdavis.edu/students/current/ Advising