This course will provide an overview of the field of biological safety microbiology and its application to the control of biohazards in a wide variety of settings for students at all levels who are interested in the epidemiology of microbial diseases. Students will review biohazards associated with occupational laboratory acquired infections, and examine select case studies to identify critical biosafety mishaps. The role of public opinion and media will be discussed as a continuous thread throughout the course. The course will teach participants how to perform a comprehensive qualitative risk assessment for biohazards and learn how to employ the control strategies to appropriately manage these risks. Course concepts can be applied to the control of biohazards, along with emphasizing protective measures when addressing incidents involving biohazards. In addition, coverage of the Select Agent Program and the additional security practices entailed with research will be covered.

MB 6500 - Advanced Tumor Virology
Credit(s): 3 Credits
An advanced course dealing with the biological, biochemical, and physical properties of oncogenic DNA and RNA tumor viruses, their modes of interaction with cells, and the molecular events of host chromosomes. Lecture topics will include the role of viral and cellular oncogenes in cell transformation, tumorigenesis and normal growth control. The role of DNA tumor viruses and retroviruses, including human immunodeficiency virus (AIDS), as tools to investigate the mechanism of DNA replication, gene expression, and growth control in eukaryotic cells will be presented. Offered every other year.

MB 6650 - Basic Immunobiology
Credit(s): 0-3 Credits
A beginning graduate level course which deals with fundamental concepts in both molecular and cellular immunology. Topics include antigen recognition structures; antigen processing and the major histocompatibility (MHC) locus; lymphocyte activation; cytokines; T and B cell development; cell-cell interaction in the immune response; and host immune responses in autoimmunity and infection. Emphasis on experimental approaches and some review of current literature. Offered every other year.

MB 6750 - Immunology Journal Club
Credit(s): 2 Credits
An advanced topics literature survey. Current topics in the molecular aspects of antigen recognition, antigen presentation, cell-cell interactions in immune systems, and signal transduction in lymphocytes and macrophages. Offered every spring semester.

MB 6820 - Advanced Topics in Virology and Cell Biology
Credit(s): 1-3 Credits
An advanced topics literature survey. Current topics in the molecular mechanisms in pathogenesis of infectious disease. Offered every other year.

MB 6920 - Microbiology Colloquium
Credit(s): 0 Credits
Attendance and participation required of all graduate students, every semester that they are in the program. Students, postdoctoral trainees, and Faculty report on important research which has recently been published in the biomedical literature. Each student presents at least once per semester.

MB 6950 - Special Study for Exams
Credit(s): 0 Credits
(Repeatable for credit)

MB 6970 - Research Topics
Credit(s): 0-1 Credits
(Repeatable for credit)

MB 6990 - Dissertation Research
Credit(s): 0-6 Credits
(Repeatable for credit)