Ph.D. Minor in Cancer Biology

The following required courses must be taken to fulfill the requirements for the Minor in Cancer Biology: G715 Biomedical Science I (3 cr.), G716 Biomedical Science II (3 cr.), G717 Biomedical III (3 cr.), G504 or G505 Research Ethics (1-2 cr.), G855 or PBHL-B651 Biostatistics (1-3 cr.), and G852 Cancer Signaling Gone Awry (2 cr.). A minimum of 12 credit hours outside of the student's major department, including two courses from the following list of five: G622 Cytogenetics of Malignancies (2-3 cr.), F849 Chemical Carcinogenesis (3 cr.), J842 Neoplastic Determinants (2 cr.), G724 Molecular Cancer Genetics (4 cr.), G852 Concepts of Cancer: Signaling Gone Awry (2 cr.), G505 Responsible Conduct of Research must also be taken.

The remainder of the minor will be selected from the following courses: Graduate G745 Biomedical Science I—Biochemical Basis of Biological Processes; G746 Biomedical Science II—Molecular Biology and Genetics; G747 Biomedical Science III—Cellular Basis of Systems Biology; G720 Stem Cell Biology; G724 Molecular Cancer Genetics (1 cr.), G726 Developmental Genetics; G729 Immunology I—Introduction to the Immune System; GRAD-G737/ANAT-D851 Introduction to Histology/Histology; G748 Principles of Toxicology 1; G751 Advances in Cytoplasmic and Nuclear Signaling, G848 Bioinformatics, Genomics, Proteomics, and Systems Biology; G817 Molecular Basis of Cell Structure and Function; G749 Introduction to Structural Biology; G807 Structural and Chemical Biology; G837 Mammalian DNA Repair and Disease; G727 Animal Models of Human Disease; Medical and Molecular Genetics Q620 Human Cytogenetics; Q622 Cytogenetics of Malignancies; Microbiology and Immunology J807 Current Topics in Immunology; J829 Current Topics in Molecular Genetics of Microorganisms; and J842 Neoplastic Determinants; Pharmacology and Toxicology F849 Chemical Carcinogenesis; F820 Cancer Chemoprevention.

The minor program must be approved by the student's Advisory Committee, which will take into consideration the student's total didactic experience. In the case of combined M.D./Ph.D. students, the Committee may approve substitution of appropriate medical school courses. The minor representative on this Committee will be selected from.
outside the student's major department and must be a member of the Cancer Biology Training Program.