**CAMB 512: Cancer Biology and Genetics**

**INSTRUCTORS:** John Lynch and Katherine Nathanson

**PREQUISITE:** BIOM600 or course director permission.

**NOTES:** Non-CAMB students must contact the course director prior to registration. Students are permitted to audit this class for non-credit with the permission of the course director.

**DESCRIPTION:** The course objective is to introduce the students to important and timely concepts in Cancer Biology and Cancer Genetics. The lectures are organized into four broad thematic groups: A) Cell-Autonomous Mechanisms (e.g., tumor suppressor and oncogene function, DNA repair pathways, senescence, apoptosis); B) Non Cell-Autonomous Mechanisms (e.g., tumor microenvironment, hypoxia, angiogenesis); C) Organ Systems (e.g., pancreatic cancer, hematopoietic malignancies); and D) Therapeutic Approaches (e.g. protein kinase inhibitors, immunotherapy, radiation therapy). The organizers, along with faculty from the School of Medicine, the Wistar Institute and CHOP, with expertise in the corresponding areas provide lectures for the course. The students are expected to present, and participate in discussions of one or more key recent papers at Journal Clubs that are held at the end of each thematic group. There will be mid-term and final exams of short essays relevant to the lectures.