



PCB6526:

Cancer Genetics

CRN#: *****, Section 001, 3 Credit Hours

CAS / Molecular Biosciences

COURSE DESCRIPTION

I. University Course Description

This course will explore major concepts in Cancer Genetics, how they are derived from experimental results and how they can be applied to outstanding problems in Cancer Biology.

II. Course Purpose

With the explosion of genetic data and personalized medicine, this course is relevant for the understanding of underlying genetic causes of cancer initiation and progression. The purpose is for the student to be able to navigate scientific and clinical data relevant for cancer genetics.

III. Course Objectives

- To learn concepts related to cancer genetics
- To learn how oncogenes and tumor suppressor genes were identified and isolated
- To learn the basics for the Human Genome Browser, cBioPortal and other web-based tools in cancer genetics
- To understand the various study designs used in cancer genetics (molecular and population-based designs)
- To understand the technological advances that have driven our progress in cancer genetics