



**PCB 6205: Cancer Biology III:
Cancer Genomics and Drug Discovery**

Course Prerequisites: PCB 6230

20023 001, Credit Hours 3

College of Arts and Sciences, CMMB

COURSE SYLLABUS

Instructor Name: Mark Alexandrow

Semester/Term & Year:	Spring 2019
Class Meeting Days:	Tuesday - Thursday
Class Meeting Time:	9:00 am-10:30 am
Class Meeting Location:	MRC 3065
Lab Meeting Location:	N/A
Delivery Method:	

I. Welcome!

This course continues the topics covered in the first semester course by providing an understanding of normal and abnormal cancer biological processes as they pertain to regulation of the genome.

II. University Course Description

An exploration of the normal and abnormal cancer biological processes as they pertain to regulation of the genome and of novel cancer gene discovery approaches, as well as methodological and conceptual approaches to oncologic drug design and development

<https://www.systemacademics.usf.edu/course-inventory/?output=detail&subj=PCB&num=6205>

III. Course Purpose

This course also provides an understanding of novel cancer gene discovery approaches utilizing genomic information, as well as methodological and conceptual approaches to oncologic drug design and development. Students are expected to have already had basic courses on cell biology, molecular biology, and biochemistry, and must have completed the first semester course, Cancer Biology I: Basics of Molecular Oncology PCB 6230.

IV. Course Objectives

Students are expected to have already had basic courses on cell biology, molecular biology, and biochemistry, and must have completed the first semester course, Cancer Biology I: Basics of Molecular Oncology PCB 6230. This course is taught jointly by multiple faculty members. Topics to be covered include transcriptional and chromatin control, microRNA regulation, DNA replication and damage, mitotic regulation, cancer gene discovery, mode of action of chemotherapeutic drugs, and rational drug design. Individual lecturers will provide recent primary research articles, and students will be expected to participate in the analysis of these papers as part of their grade. Students are expected to supplement the lecture information and primary research paper reading, and gain more in-depth understanding of each topic, by studying appropriate chapters in the primary assigned book.

V. Student Learning Outcomes

There are three exams and no final exam, all of an essay format. Questions are provided by individual lecturers that are derived from the information covered in the lecture and further discussed in the assigned

papers. Students are encouraged to arrange meetings with individual faculty prior to each exam to discuss questions that students may have regarding material covered in lectures.