



**BSC6875:**

**Cancer Drug Discovery**

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

CAS / Molecular Biosciences

**COURSE DESCRIPTION**

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**I. Course Objective**

This course is aimed to expose graduate students to modern techniques for cancer drug discovery, the principles of rational drug design, and the discovery of important anti-cancer drugs. The course is divided into three parts. Part 1 is an overview of drug discovery/development concepts, high-throughput screening and combinatorial chemistry, and structural biology and structure-based drug design. Part 2 is the discussion of clinically relevant anti-cancer drugs by class and the mode of action. Part 3 is the introduction to drug discovery process and techniques. In addition to lecture notes, the individual lectures will be supplemented with recent primary research articles. Students are expected to grasp the contents of the lecture notes, and also gain more in-depth understanding of each topic through reading and analyzing the primary literature.

**II. Course Prerequisites**

No students should take the Cancer Drug Discovery course without a C or better in the first half of Undergraduate Organic Chemistry. It is highly recommended that you take Cancer Biology I before this course.