



University of California, Santa Barbara
College of Engineering

Entrepreneurial Opportunities in the Health Care Industry

ENGR192/292 C, Spring 2006

Biotechnology Program Management Workshop

(Tuesdays 7:00-9:00 PM at the Engineering Science Building, room 2001)

COURSE DESCRIPTION:

This course will educate students about key activities that take place in a biotech company during the U.S. drug discovery, development and approval process. The course will be an introduction to different areas of expertise that are required to support the business of biotechnology- it will expose students to different career options both for science and non-science majors.

Experts from the biotech industry will address aspects of their fields that highlight why they are necessary components of the overall business and research strategies of this industry.

COURSE OBJECTIVES:

1. Discover the functions of divisions of a biotech company.
2. Learn what it takes to be successful in various divisions of a biotech company.
3. Understand the process by which a new biotech product advances from discovery, testing, FDA approval, and into the U.S. market.
4. Gain insight into the factors influencing the success of a product/company.

ASSIGNMENT:

There are two separate assignments that students will receive a grade for in this course. First, students will be assigned team members that will lead one 15-20 minute discussion panel regarding aspects of the speaker's presentations during the quarter. Each student on the discussion panel will be graded on the relevance of the discussion that they initiate and on their individual contribution.

In addition, each student must pick one research project out of the two assignments listed below. The project must be 2-3 pages long and must state how the information was obtained (include names and emails, reference material, etc., if that that is how you got the information). You are welcome to consult with any of the speakers or anyone in your class:

1. Critically evaluate two compounds in late stage clinical trials in terms of their perceived clinical efficacy, potential negatives, target patient population, and probability of success. Which do you think will be more successful and why?
2. Analyze an early stage biotechnology company of your choice. What do you think they will need in the way of resources to be successful? Is their current management team likely to appeal to investors and gain drug approval? Why?

COURSE REQUIREMENTS: Classes will be held once a week, 2 hours per session. Guest lecturers will provide information in their specific health care fields. Student teams will be created of not more than 4 persons.

Students will be expected to interact with the guest lecturers and industry experts. Student teams will assess potential market opportunities in each of the fields. Roundtable discussions will be conducted and each student will be expected to participate. Students will discuss and explore potential market opportunities during the roundtable discussions.

GRADING:

30%	individual participation in discussion panels. (Students will be expected to interact with the guest lecturers/industry experts).
50%	individual assignment
20%	attendance

192C/292C Course Speaker list

April 4	Bruce Altrock— former V.P. Research Amgen Research
April 11	Round Table Discussion with Students
April 18	Robin Campbell—CEO Naryx Pharma, Inc. Commercialization Strategy
April 25	Roy Hardiman-- V.P. Corporate Law and Assistant Secretary Genentech Legal issues/licensing
May 2	Ralph Smalling— Regulatory Affairs
May 9	Dave Lacey-- V.P. Preclinical Development Amgen Preclinical Development
May 16	Geoff Slaff—V.P. Process Development Amgen Scale-up and Process Development
May 23	Peter Grebow— Exec. V.P. Worldwide Technical Operations CEPHALON Technical Operations
May 30	Detlef Albrecht—V.P. of Research and Clinical Development Ilypsa Inc “Clinical Research and Development”