



University of California, Santa Barbara
College of Engineering

Frontiers in Cancer Research: New Developments in Industry and Academia

BMSE 294B, Spring 2008

Lecturer: Leslie Edwards/Bruce Altrock

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OFFICE HRS: by appointment

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CLASS: Monday, 12:00-1:30 PM

CLASSROOM: Engineering Science Building (ESB), room 2001

COURSE FOCUS: This course is intended for students with an interest in learning the leading edge in cancer modeling, diagnosis and therapy. The course will involve interaction with academic and industry researchers. Guest lecturers will address current trends in cancer research including disease diagnosis and therapy. Student teams will utilize this information to propose new approaches to cancer treatment.

This course will help students develop an insight into current practices and promising new approaches to cancer therapy. Students will gain an appreciation of different facets of the work and the issues that confront workers in the field.

READING MATERIALS: To be provided in class

COURSE OBJECTIVES:

The student will:

1. Develop an understanding of cancer as a set of diseases and of the diagnostic and therapeutic tools presently available to treat the disease.
2. Gain an appreciation for what hurdles companies experience in trying to develop modeling, diagnosis and therapeutic approaches to cancer.
3. Work together to propose new approaches to cancer therapy.
4. Benefit from discussions with experts concerning the needs and abilities of the industry.

COURSE REQUIREMENTS: Classes will be held once a week, 1.5 hours per session. Guest lecturers will provide information on their specific background.

Students will be expected to interact with the guest lecturers and industry experts. During the quarter student teams will be created of not more than 3 persons. Teams will then identify, investigate and present a novel health care solution to cancer diagnosis and/or treatment.

GRADING AND LOGISTICS:

30% Individual attendance, participation and interaction during class and roundtable discussions

40% Teams (3 members) will present a novel concept for cancer diagnosis/therapy. Each team will give a 10 to 15 minute presentation.

30% Individual report regarding the proposal.

COURSE SCHEDULE AND SPEAKERS:

March 31	Bruce Altrock, Ph.D, Biopharmaceutical Consulting
April 7	Glenn Begley, Ph.D. VP of Hematology and Oncology, Amgen
April 14	Robert Cardiff, M.D., Ph.D. Center for Comparative Medicine, UC Davis
April 21	Rick Kendall, Ph.D. Executive Director of Oncology, Amgen
April 28	Eric Whitters, Ph.D. Head of Technical Development, Siemens Diagnostics
May 5	Terri Burgess, Ph.D. Director of Oncology, Amgen
May 12	William Monte, Ph.D. Global Associate Director of Oncology, Abbott
May 19	Gary Wilcox, Ph.D. former Executive Vice President of Operations and Director, ICOS
May 26	Memorial Day
June 2	Student presentations

ATTENDANCE: Absences will affect your participation grade negatively. Teams will have to find time to collaborate outside of scheduled class time in order to manage the assignments.

WRITTEN ASSIGNMENT POLICY: All written assignments must be typed and submitted electronically or handed in by the beginning of class on the day when the assignment is due.

WRITTEN REPORTS: Reports should be typed in 12 pt font, double-spaced, with margins 1” all around.

EVALUATION OF PARTICIPATION: Because your participation is vital to the success of the class as a whole, daily participation grades will be recorded and be a significant portion of your overall grade.