

Teaching

Graduate catalog courses: Molecular, Cellular and Developmental Biology (MCDB), Biomolecular Science and Engineering (BMSE)

- **MCDB238 / BMSE238: Angiogenesis in Health and Disease**

Angiogenesis, the formation of new blood vessels, is not only a crucial step in the development of virtually all organs, but also an ongoing process in the adult which is of prime importance for tissue homeostasis. Aberrant angiogenesis is a hallmark of many diseases, including diabetes, rheumatoid arthritis, adult macular degeneration and cancer. The course will delineate both physiological and pathological angiogenesis, and then focus in on tumor angiogenesis. Translational applications such as tissue engineering, diagnosis and therapy of cancer and other diseases will be discussed.

Requirements: graduate standing

Dates: Winter Quarters

- **MCDB / BMSE229: Protein Biochemistry**

Protein Biochemistry class 229 (MCDB/BSME), covers Protein Structure and Structure/Function relationships. Three times a week, 1 h per class (M,W,F 10 am).

Requirements: graduate standing.

Dates: Fall quarter 2009

Undergraduate catalog courses: Molecular, Cellular and Developmental Biology (MCDB) and Mechanical Engineering (ME)

- **MCDB103L: Cell Biology Lab**

Laboratory techniques of modern cell biology; molecular dissection of cell structure and function; bacterial and mammalian cell culture; microscopy.

Requirements: MCDB 1A, and EEMB 2 and MCDB 1B, and MCDB 103 (may be taken concurrently). Completion of all listed prerequisites with a grade of C or better.

Dates: Winter Quarters

- **MCDB1A: Introductory Biology**

Introduction to biochemistry, cell biology and development, and genetics.

Requirements: Chemistry 1A-B-C (Chemistry 1C may be taken concurrently); or a score of 4 or better on either the Advanced Placement Chemistry or Advanced Placement Biology examinations.

Dates: Summer 2015

- **MCDB99 and MCDB199: Independent Studies**

Research opportunities for undergraduate students of the lower (MCDB99) and upper division (MCDB199), to integrate research with education.

Requirements: Undergraduate Standing, GPA > 3.0

Dates: variable

- **ME189A: Capstone Student Design Projects (Co-Mentor)**

Students work in teams under the direction of a faculty advisor (and possibly an industrial sponsor) to tackle an engineering design project. Engineering communication, such as reports and oral presentations are covered. Emphasis on practical, hands-on experience, and the integration of analytical and design skills acquired in the companion ME 156 courses.

Instructor: Stephen Laguette

Requirements: ME 153; and ME 156A (may be taken concurrently)

Dates: 2010/2011

- **ME128: Design of Biomedical Devices (Guest Lecturer)**

Introd. course addresses the challenges of biomedical device design, prototyping and testing, material considerations, regulatory requirements, design control, human factors and ethics.

Instructor: Stephen Laguette

Requirements: Mechanical Engineering 10, 14, 15, 16, and 153; open to ME majors only.

Dates: Fall Quarters

Other Courses and workshops:

- **Neuroscience Research Institute Workshop: Life Cell Imaging**

Guest Speaker: Mammalian Cell Culture

Requirements: none

Dates: Fall 2011

- **California Nanosystems Institute Course: Mammalian cell culture**

Hands-on cell culture class on a 2:1 student:teacher ratio. Covers all basic aspects of mammalian cell culture. Includes EHS Blood-borne Pathogen (BBP) training required for handling human and BSL2 cell lines (BBP class can be joined separately, pls inquire). Two times a week, 3 h per class (exact dates available upon sign up), for 3 weeks.

Requirements: none.

Dates: quarterly 2009-2013