

# Molecular and Cell Biology (MCELLBI)

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## **MCELLBI 15 Current Topics in the Biological Sciences 2 Units**

**Department:** Molecular and Cell Biology

**Course level:** Undergraduate

**Term course may be offered:** Spring

**Grading:** Letter grade.

**Hours and format:** 2 hours of Lecture and 1 hour of Discussion per week for 15 weeks.

**Prerequisites:** Suitable for freshmen who plan to major in a biological science.

Students in this course will critically examine modern methods of biological investigations and their social implications. Relevant literature will be used to present basic biological concepts that address the cultural, technological and health aspects of current topics in the biological sciences. Designing and evaluating scientific questions will be stressed. Course may be repeated for credit as topic varies. Course may be repeated for credit when topic changes. Instructor: Matsui

## **MCELLBI C31/L & S C30X Big Ideas in Cell Biology 3 Units**

**Department:** Molecular and Cell Biology; Letters and Science

**Course level:** Undergraduate

**Term course may be offered:** Spring

**Grading:** Letter grade.

**Hours and format:** 2 hours of Lecture and 1 hour of Discussion per week for 15 weeks.

An introduction for students who do not intend to major in biology but who wish to satisfy their breadth requirement in Biological Sciences. Some major concepts of modern biology, ranging from the role of DNA and the way cells communicate, to interactions of cells and creatures with their environment, will be discussed without jargon and with attention to their relevance in contemporary life and culture.

Instructor: Wilt

## **MCELLBI 32 Introduction to Human Physiology 3 Units**

**Department:** Molecular and Cell Biology

**Course level:** Undergraduate

**Terms course may be offered:** Fall and summer

**Grading:** Letter grade.

**Hours and format:** 3 hours of Lecture and 1 hour of Discussion per week for 15 weeks. 6 hours of Lecture and 2 hours of Discussion per week for 8 weeks.

**Prerequisites:** One year high school or college chemistry.

A comprehensive introduction to human cell biology. The course will concentrate on basic mechanisms underlying human life processes, including cells and membranes; nerve and muscle function; cardiovascular, respiratory, renal, and gastrointestinal physiology; metabolism, endocrinology, and reproduction.

Instructors: Machen, Ball

## **MCELLBI 32L Introduction to Human Physiology Laboratory 2 Units**

**Department:** Molecular and Cell Biology

**Course level:** Undergraduate

**Terms course may be offered:** Fall and summer

**Grading:** Letter grade.

**Hours and format:** 1 hour of Lecture and 3 hours of Laboratory per week for 15 weeks. 2 hours of Lecture and 6 hours of Laboratory per week for 8 weeks. 2 hours of Lecture and 8 hours of Laboratory per week for 6 weeks.

**Prerequisites:** 32 or may be taken concurrently.

Experiments and demonstrations are designed to amplify and reinforce information presented in 32. Exercises include investigations into the structure and function of muscle, nerve, cardiovascular, renal, respiratory,