

## **LS50 Course Description**

An intensive two-semester, double course that introduces the natural sciences as an integrated whole to students who have a very strong interest in science. Our goal is to teach students how to solve scientific problems by drawing methods and concepts from biology, chemistry, physics, and mathematics. The course uses examples from biology as an integrating theme, principles from physics and mathematics to reduce complex problems to simpler forms, and computer simulation to allow students to develop their intuition about the behavior of the dynamical systems that control the physical and biological universe. The course either includes bootcamps to introduce students to biological experiments and the computer language, Matlab, or instructions and exercises to Learn Python 3 The Hard Way. Each semester will include a project lab, in which students will work in small teams to do original research on unsolved biological problems. Prerequisite: high school calculus and permission of the instructor.

**Faculty: Andrew Murray (MCB), Michael Desai (OEB), Cassandra Extavour (OEB), Benjamin de Bivort (OEB), and Aravinthan Samuel (Physics)**

**Times: Lecture: M, T, W, Th, F, 10-11:30am; Laboratories: Tues OR Wed 3:00-5:45pm.**